

SELF-REGULATED STRATEGIES DEVELOPMENT FOR IMPROVING THE
WRITING SKILLS OF STUDENTS WITH INTERNALIZING BEHAVIOR
PATTERNS AND WRITING CONCERNS

By

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Dissertation

Submitted to the Faculty of the
Graduate School of Vanderbilt University
in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in

Special Education

May, 2007

Nashville, Tennessee

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To my children,
Joshua and Catherine

ACKNOWLEDGEMENTS

The completion of this dissertation would not have been possible without the support from many people. First, I wish to express my deepest gratitude to my advisor, Kathleen Lane, for her unwavering patience, understanding, and mentorship. She encouraged and supported me in completing tasks beyond what I thought I could do. I would also like to thank my doctoral committee – Vicki Harris, Joseph Wehby, Karen Harris, and Steve Graham – for sharing their expertise and time.

I also wish to thank the Project WRITE research team for their assistance and support in the completion of this project: Ashley Mamele, Jessica Nackel, Karin Sandmel, Kate Mahan, Lilli Krauss, Mary Brindle, and Rachel Mathias.

A very special acknowledgement goes to the teachers, parents, and students in Williamson County Schools, who opened their doors and allowed me to learn from them. Thank you for sharing and providing such tremendous support.

I would like to extend acknowledgement to my husband, Robert, who sacrificed time to allow me to complete my doctoral program.

To my mother (Dorothy), father (Richard), and siblings (Theresa, Jennifer, Katie, Richard, and Ben), for their endless assistance. They were the foundation that gave me support and encouragement to continue my academic pursuits.

Most importantly, I would like to thank my children, Joshua and Catherine, for their support and understanding during the years in my doctoral program. Despite the late nights and working weekends, they never complained and were always willing to help whenever possible.

TABLE OF CONTENTS

	Page
DEDICATION	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS.....	iv-v
LIST OF TABLES	vi
LIST OF FIGURES	vii
 Chapter	
I. STATEMENT OF THE PROBLEM.....	1
Addressing the needs of students at risk for EBD	2
Purpose of the Study	4
Definition of terms.....	5
Hypotheses.....	7
II. LITERATURE REVIEW.....	9
Students with internalizing EBD: An understudied group	9
Students with internalizing behavior patterns: Behavioral and social characteristics.....	11
Students with internalizing behavior patterns: Academic characteristics.....	14
Identification using positive behavior supports	15
Primary supports	16
Secondary supports	17
Tertiary supports	18
Self-Regulation	19
Self-Regulated Strategies Development	21
SRSD instruction in lower elementary grades	28
Overview of SRSD studies conducted in elementary grades.....	28
Synthesis across studies	35
SRSD instruction for students with, or at risk for, EBD.....	39
Overview of SRSD studies for students with, or at risk for, EBD.....	39
Synthesis across studies with students at risk for, or with, EBD	46
SRSD within the context of a PBS model	49

III. METHOD	51
Participants.....	51
Participant selection criteria.....	56
Data collection procedures and measures	60
Intervention.....	72
Experimental design and data analysis	79
IV. RESULTS	84
Treatment fidelity.....	84
Planning	86
Writing outcomes.....	87
Behavioral outcomes.....	97
Social validity	100
V. DISCUSSION	104
Appendix	
A. LESSON PLANS	122-162
B. TREATMENT FIDELITY CHECKLIST	163-171
C. ROCKET GRAPHING SHEET.....	172-173
D. POW AND TREE MNEMONIC CHART	174-175
E. GRAPHIC ORGANIZER	176-177
F. PBS TICKET	178-179
G. RAPID FIRE CARDS.....	180-182
H. TRANSFER SHEET.....	183-184
I. TRANSITION WORD LIST.....	185-186
J. SELF-STATEMENT SHEET	187-188
K. SOCIAL VALIDITY INTERVIEW	189-191
L. IRP-15 ADAPTED.....	192-194
M. CIRP ADAPTED	195-197
N. ESSAY PROBES.....	198-202
O. STUDENT ESSAY SAMPLES.....	203-207
REFERENCES	208-215

LIST OF TABLES

Table	Page
1. Student Characteristics Pre-Intervention.	55
2. Social Validity and Treatment Fidelity by Student and Phase	85
3. Writing and Behavioral Changes Across Students and by Phase	92-93

LIST OF FIGURES

Figure	Page
1. Story Elements by Student and Phase.....	94
2. Quality of Essays Across Students and Phases.....	95
3. Length of Essays Across Students and Phases.....	96
4. Academic Engaged Time Across Students and Phases	98

CHAPTER I

STATEMENT OF THE PROBLEM

Students with emotional and behavioral disorders (EBD) are characterized by aberrant behavior and social patterns that inhibit access to academics in a classroom setting. While most often recognized for their externalizing behavior patterns, it is important to note that students with EBD may also have internalizing behavior patterns such as anxiety, depression, and somatic complaints. The latter behavior patterns pose additional concerns to educators; these students are less likely to be recognized during early years, thereby delaying supports until these behavior patterns become more defined and serious (Gresham, Lane, MacMillan, & Bocian, 1999; Walker, Ramsey, & Gresham, 2004).

In addition, students with EBD are characterized by academic deficits that tend to worsen over time (Anderson, Kutash, & Duchnowski, 2001; Nelson, Benner, Lane, & Smith, 2004). While social and behavioral interventions for this population have been studied extensively (Kavale, Mathur, Forness, Rutherford, & Quinn, 1997; Miller, Lane, & Wehby, 2005), very little research has been done on academic interventions (Lane, 2004). In a recent review of the literature, Little (in preparation) found only 13 studies evaluating reading interventions for students with or at risk for EBD at the elementary level. Even fewer treatment-outcome studies have been conducted in the area of mathematics and writing (Lane, 2004). The absence of writing interventions is particularly disturbing given that written expression is important for demonstrating

academic knowledge. Further, written expression can be an important vehicle for communicating and processing one's feelings (Graham, 2006; Gresham & Kern, 2004; Tindal & Crawford, 2002), particularly for students with internalizing behavior concerns who struggle with appropriate expression of feelings (Lane, Wehby, Little, & Cooley, 2005). Moving forward, it will be important for researchers to identify students early to provide supports to improve writing skills of those with and at risk for EBD.

In addition to the lack of academic intervention studies for this population, systematic school wide screening for early identification of students at risk is rarely implemented. This is unfortunate because intervention support cannot be provided until students who may be in need of additional supports are identified. Systematic screening is important because 10-15% of the student population is likely to need secondary supports in academic, behavioral, or combined domains (Lane, in review; Lewis & Sugai, 1999). In particular, screening is important for identifying students with internalizing behavior patterns given that these youngsters often go unrecognized by their general education teachers (Gresham & Kern, 2004).

Addressing the Needs of Students at Risk for EBD

Once children are identified as being at risk for behavioral disorders, it is imperative that teachers have empirically validated interventions available to address the multiple needs of these children. While many interventions have been empirically validated to address social (i.e., Skillstreaming; Goldstein, 1988; The Dina Dinosaur Treatment Program; Webster-Stratton & Reid, 2003) and academic deficits (i.e. Peer Assisted Learning Strategies; PALS; Barton-Arwood, Wehby, & Falk, 2005; Fuchs,

Fuchs, Mathes, & Simmons, 1997), few interventions have been developed that successfully address multiple facets of needs exhibited by students with EBD. One such intervention that may address the multiple needs of this population of students is Self-Regulated Strategies Development (SRSD; Harris & Graham, 1996). Children who exhibit behavioral concerns are often characterized by difficulty in self-regulating emotional and behavioral responses to their environments (Gomez, Baird, & Jung, 2004). For students with internalizing behavior concerns this deficit in self-regulation of emotions may manifest in excessive fears, physical symptoms, or a pervasive mood of unhappiness (Individuals with Disabilities Education Improvement Act, 2004). This in turn, can result in an inability to access key academic instruction. Teaching students to self-regulate behavior while at the same time specifically teaching key academic tasks may be effective for both behavioral and academic issues. While self-regulatory procedures have been used successfully to teach various academic skills (ie., arithmetic, Levondoski & Cartledge, 2000; reading, Carr & Punzo, 1993), very little research has been completed to date evaluating the effects of SRSD for persuasive writing with young students at risk for internalizing behavior patterns (Lane, Harris, Graham, Weisenbach, Brindle, & Morphy, in press). Using SRSD to teach persuasive writing skills to students with internalizing behavior patterns may improve writing skills resulting in collateral effects on self-regulation of behavior such as being able to remain engaged during academic instruction. Furthermore, writing may become a valuable outlet for students who are hesitant to verbally express their feelings or concerns.

Purpose of the Study

The purpose of this study was to address two voids in the literature. First, systematic screening procedures were used to identify students with internalizing behavior patterns and poor writing skills according to data collected to monitor a school's primary prevention plan. Second, a multiple baseline design across participants with multiple probes during baseline was used to evaluate the effects of SRSD for persuasive writing (Harris & Graham, 1996), implemented as a secondary intervention within the schools' PBS models. Specifically, (a) the immediate effects of instruction on the persuasive writing skills of second-grade students at risk for internalizing EBD, and (b) collateral effects on classroom decorum during regular writing instruction were examined in this single subject study.

This study is important given that the lack of writing achievement in early grade levels creates difficulties later in a student's school career as well as continued struggles in post-secondary education. For example, written expression has been associated with psychological and physiological benefits (Graham, 2006; Smyth, 1998). The challenges faced by students with poor writing skills, particularly those with internalizing behavioral concerns, necessitate interventions in the early years to prevent future problems.

Specifically, seven research questions were addressed in this study.

1. Does SRSD instruction in persuasive writing increase the number of essential elements included in essays produced by students at high risk for internalizing EBD who have limited writing skills, immediately following instruction and at maintenance time points?

2. Does SRSD instruction in persuasive writing improve the length of essays written by students at high risk for internalizing EBD who have limited writing skills, immediately following instruction and at maintenance time points?
3. Does SRSD instruction in persuasive writing improve the quality of essays written by students at high risk for internalizing EBD who have limited writing skills, immediately following instruction and at maintenance time points?
4. Does SRSD instruction in persuasive writing result in concomitant improvement in academic engaged time during classroom writing activities of students with internalizing behavior patterns who have limited writing skills, immediately following instruction and at maintenance?
5. Does SRSD instruction for persuasive writing result in concomitant decreases in inappropriate behavior, during classroom writing activities, of students at high risk for internalizing EBD who have limited writing skills, immediately following instruction and at maintenance?
6. Do students who are at risk for internalizing EBD, who also have limited writing skills, view SRSD instruction for persuasive writing to be socially valid?
7. Do general education teachers view the procedural aspects of SRSD instruction, provided to student outside the classroom setting by a researcher, to be socially valid?

Definition of Terms

Students with internalizing behavior patterns. For this study, students with internalizing behavior patterns were identified using the Systematic Screening for

Behavior Disorders (SSBD; Walker & Severson, 1992). Students exceeding normative criteria at Stage Two of the SSBD (described in further detail in Chapter 4) were considered for participation in this study.

Students with limited writing abilities. Students who scored at or below the thirty-seventh percentile on the story construction subtest of the Test of Written Language-3 (TOWL-3; Hammil & Larsen, 1996) were considered as having limited writing abilities. In addition to scoring at or below the thirty-seventh percentile on the TOWL-3, students had to be able to produce at least one complete sentence to be eligible for participation in this study.

Self-Regulated Strategies Development. SRSD (Harris & Graham, 1996) instruction included all six stages with modifications for students with EBD as presented in Adkins (2005). Lessons included (a) development of background knowledge, (b) discussion of the strategy, (c) modeling the strategy, (d) memorizing the strategy, (e) supporting the students' use of the strategy, and (f) independent practice. In addition to the six stages of SRSD instruction, self-regulatory process of goal setting, self-monitoring, self-instruction, and self-reinforcement were included.

Criterion performance. Instruction in SRSD strategy acquisition is criterion based. Students are instructed until they reach a predetermined criterion level. For this study, criterion was established when students were able to produce an essay independently (with no prompts) that included all essential essay elements and planning notes.

Hypotheses

It was hypothesized, based on the research reviewed, that second-grade students with co-occurring internalizing behavior patterns and limited writing skills who participated in SRSD instruction for writing persuasive essays would increase the number of essential elements included in essays with collateral improvements in their writing quality and quantity. In addition, it was hypothesized that collateral effects on academic engagement and inappropriate behaviors would be exhibited by students during classroom writing activities. Specifically, it was hypothesized that students' academic engagement would increase and inappropriate behavior would decrease in the general education setting during writing instruction following SRSD instruction for persuasive writing. Finally, it was hypothesized that students and teachers would find SRSD instruction for persuasive writing as socially valid.

To answer the research questions, 6 students were assigned to one of three legs in a multiple baseline design with multiple probes during baseline. The effects of individual instruction in persuasive essay writing on writing and behavioral performance were assessed. The single subject design allowed evaluation of the functional relation between the independent and dependent variables for each student. The social validity question was addressed by collecting social validity ratings from two perspectives (teacher and student) both pre and post-intervention. In addition, students were interviewed at the end of SRSD instruction to determine if they viewed the SRSD strategy as socially valid.

In the following chapter, a comprehensive review of the literature is presented of recent studies evaluating the effects of SRSD instruction for students with or at risk for EBD. First, behavioral, social, and academic characteristics of students with internalizing

behavior patterns are presented. Second, methods of identifying students at risk for behavioral, social, or academic concerns through a positive behavior support model are addressed. Third, emotional and behavioral self-regulation along with self-regulation requirements of the writing process are addressed. Fourth, the independent variable (SRSD for persuasive writing) is described. Fifth, studies that have been conducted to evaluate the effects of SRSD for writing with lower elementary students with writing problems, attention deficit hyperactivity disorder (ADHD) or learning disabilities (LD) are evaluated. Finally, studies evaluating the effects of SRSD for writing with lower elementary students with or at risk for EBD are presented.

CHAPTER II

LITERATURE REVIEW

Students at risk for internalizing behavior patterns present a myriad of concerns in social, behavioral, and academic domains that affect not only the child, but also teachers, peers, and family. In this chapter, characteristics of students with or at risk for EBD are discussed as strategies for identifying students early in their school careers. Then, self-regulation in relation to students with internalizing behavior patterns and the writing process are presented. Furthermore, studies evaluating the effects of SRSD for writing with lower elementary grade students are discussed. First, studies evaluating the effects of SRSD for writing with early elementary students with limited writing skills, LD, and ADHD are discussed. Second, studies evaluating the effects of SRSD for writing with students with or at risk for EBD in the early elementary grades are reviewed. This chapter ends with how the current study addresses a void in this line of research.

Students with Internalizing EBD: An Understudied Group

Students with EBD can exhibit internalizing, externalizing, or combined behavior patterns (Achenbach, Howell, McConaughy, & Stanger, 1995). Externalizing disorders refer to behaviors that manifest in physical or verbal aggression. Students with externalizing behavior patterns often exhibit overt behaviors such as hitting, defiance of authority figures, or profane language that may impede access to the learning environment for teachers, peers, and themselves (Kerr & Nelson, 2002). Internalizing

disorders include behaviors that manifest in anxiety-related disorders, mood disorders, or suicidal behavior (Diagnostic and Statistical Manual IV-TR; DSM-IV-TR; American Psychiatric Association, 2000). Approximately 50% of students with EBD exhibit co-morbid externalizing and internalizing disorders (Achenbach, et al., 1995; Gresham, et al., 1999). Despite the severity of these characteristics, not all students with EBD will go on to receive special education support services under the category of emotionally disturbed per the Individuals with Disabilities Educational Improvement Act (IDEIA, 2004).

IDEIA (2004) defines emotional disturbance (ED) as (a) an inability to learn that cannot be explained by intellectual, sensory, or health factors, (b) an inability to build or maintain relationships with peers and teachers, (c) inappropriate feelings or behaviors under normal circumstances, (d) pervasive mood of unhappiness, or (e) tendency to develop fears or physical symptoms associated with personal or school problems. One or more of these conditions must be present over a long period of time or to a marked degree that adversely affects school performance. Yet, despite the references in this definition to students with internalizing disorders (i.e., depression or physical symptoms), students with internalizing disorders remain under identified and consequently may not receive necessary supports (Gresham & Kern, 2004). It may be that students with internalizing concerns do not cause the class-wide disruptions characteristic of students with externalizing disorders; therefore, teachers do not refer students with internalizing behaviors for special education services as often as students with externalizing behaviors (Gresham & Kern, 2004).

Students with Internalizing Behavior Patterns: Behavioral and Social Characteristics

As previously stated, students with internalizing behavior patterns are characterized by anxiety, depressed moods, or suicidal behavior. These behavior patterns may affect the student's ability to remain engaged in academic tasks, create and maintain friendships with peers, and respond to social situations in a socially acceptable manner (Gresham & Kern, 2004).

Anxiety Related Disorders

Anxiety in students can manifest in various psychological diagnoses. Students with anxiety can exhibit separation anxiety disorders, selective mutism, obsessive-compulsive disorder, or posttraumatic stress disorder (Gresham & Kern, 2004).

Separation anxiety occurs when a child has excessive anxiety over leaving the home or caregivers. This childhood onset disorder must have occurred for more than 4 weeks and adversely affect social or academic functioning. Selective mutism occurs when a child refuses to speak in social situations as a result of excessive fear of social interactions. Refusing to speak in school situations may hinder the acquisition of key academic skills since teachers often solicit information through instructional requests and directives (Gresham & Kern).

Obsessive-compulsive disorder manifests in recurrent obsessions (ideas or thoughts) or compulsions (behaviors) that consume a child's time and cause marked distress. While most obsessive-compulsive behaviors do not occur in front of teachers or peers (American Psychiatric Association DSM-TR, 2000), distressful, pervasive thoughts may hinder engagement in academic tasks. Posttraumatic stress disorder (PTSD) occurs

after exposure to an event that is life threatening or could cause serious injury.

Characteristics of PTSD include nightmares or physical symptoms such as stomachaches and headaches. These psychosomatic complaints may result in excessive absences or frequent visits to the school nurse's office causing students to miss key academic skills.

Depressed Moods

While excessive anxiety may hinder a student's ability to remain focused on academic tasks, depression can also have deleterious effects on students' academic acquisition, peer acceptance, and social responses to environmental factors. Mood disorders include major depressive disorder and dysthymic disorder. Major depressive disorder is characterized by a loss of interest in almost all activities. Depression can manifest in social withdrawal, irritability, and somatic complaints (American Psychiatric Association, 2000). Depressed moods usually last the majority of the day and must occur for at least 2 weeks. Loss of interest in activities can result in isolation from peers.

Dysthymic disorder is similar to major depressive disorder with the exception of chronicity and severity. While symptoms with dysthymic disorders are usually less severe than those of major depressive disorder, symptoms may persist for years leading to extremely deleterious consequences such as an inability to maintain employment or excessive absences from school related to physical symptoms resulting from depression (Gresham & Kern, 2004). While anxiety and depressive mood disorders can negatively affect a student's ability to exhibit socially appropriate behaviors, remain engaged in academic tasks, and create and maintain friendships with peers, the greatest threat for these students is the increased likelihood of suicide.

Suicide

Suicide is the fourth leading cause of death in children ages 10 to 14 (Hoyert, Konanek, & Murphy, 1999). Suicidal behaviors are more common among children with internalizing disorders than those with other emotional or behavioral disorders including students with externalizing behavior patterns (Gresham & Kern, 2004). Warning signs of suicidal ideation in children include verbal threats of suicide, depression, giving away valued possessions, and sudden changes in behavior. Obviously, the outcomes for students with internalizing disorders can be detrimental not only to the student, but to their families and social networks as well.

Students with internalizing behavior patterns exhibit anxiety, depression, and/or suicidal ideation that impede access to academic instruction and positive peer relations. In addition, these students often respond inappropriately to environmental factors resulting in inappropriate social behavior. Students with internalizing problems are neglected by peers due to their inability or unwillingness to join a group or initiate peer interactions. Olson and Rosenblum (1998) found that early internalizing behavior patterns were manifested in lower levels of social competence. In addition, students with internalizing behavior reported feeling less well-liked by peers and teachers than students with externalizing disorders (Talbot & Fleming, 2003). In a study contrasting students with externalizing, internalizing, and typical behavior patterns, Gresham et al. (1999) found that students with both internalizing and externalizing behavior patterns showed poorer social skills, were less accepted by peers, and reported feeling lonelier than controls. To further exacerbate social tribulations in the educational setting, these

students are characterized by academic deficits, particularly in literacy skills (Lane, Wehby et al., 2005).

Students with Internalizing Behavior Patterns: Academic Characteristics

Most studies conducted to date look at the academic characteristics of students with EBD as a whole, without differentiating students who have internalizing or externalizing disorders. In a review of the literature on the academic status of students with EBD, Trout, Nordness, Pierce, and Epstein (2003) found that students with EBD were academically behind their peers without disabilities in reading, arithmetic, and written expression. Students with EBD performed similarly to students with learning disabilities (LD) and attention deficit hyperactivity disorder (ADHD), particularly in the areas of arithmetic and written expression. Despite the similarities in academic performance between students with LD and those with EBD, students with LD tend to improve over time while students with EBD fall farther behind or remain stable at best (Anderson et al., 2001). This lack of improvement in academic skills of students with EBD may be a result of later identification for special education services and greater rate of absenteeism than students with LD, or behavioral patterns that interfere with intervention efforts (Wagner & Davis, 2006). In contrast with findings from Trout et al. (2003), Wagner and Cameto (2004) found that students with EBD had reading and mathematic abilities closer to grade level than students with disabilities as a whole; however, they were more likely to receive poor grades from their teachers. Wagner et al. (2006), using the Elementary Longitudinal Study (SEELS) and the National Longitudinal Transition Study-2 (NLTS2), found that students with EBD were less likely to receive academic support services such as tutoring to assist in addressing these academic deficits.

A few researchers have attempted to differentiate the academic characteristics of students with internalizing and externalizing behaviors. Gresham and colleagues (1999) found that teachers reported lower levels of academic competence for students with externalizing behaviors relative to students with typical or internalizing behavior patterns. However, students in the internalizing groups had lower academic self-concept scores than students in the externalizing group. In other words, while students with internalizing behavior patterns perceived themselves as having lower academic competence than students with externalizing behavior patterns, teachers perceived them as having higher academic competence. While academic competence of students with internalizing behavior patterns may be in the average range, the lower self-concept of these students may result in a lack of academic participation. Lack of academic participation and engagement may eventually become an academic deficit as students are unable to access instruction. This self-fulfilling prophecy exemplifies the need for early identification and intervention. Talbott and Fleming (2003), in a study identifying characteristics of 4,088 early adolescent youth in urban settings, also found that students with externalizing, internalizing, or co-morbid concerns performed significantly worse on reading outcome measures than typically developing peers. With the growing problems of poor academic achievement and pejorative outcomes for students with internalizing behavior patterns, it is imperative to identify and intervene early with this population.

Identification Using Positive Behavior Support

While students with externalizing EBD are identified more frequently by teachers due to their overt behaviors that challenge teachers' authority, students with internalizing

EBD are under identified (Gresham & Kern, 2004). Under identification of students with internalizing disorders is concerning since these students face multiple negative outcomes if untreated (Gresham & Kern). While the withdrawn behaviors of this population of students do not always cause classroom disruptions, teachers need tools to identify and intervene early to prevent academic deficits and negative social outcomes such as isolation and rejection by peers (Gresham & Kern). One method of identifying and providing academic and behavior support for all students is to conduct systematic screenings within the context of the positive behavior support model (PBS; Lane, in press; Lane, Gresham, & O'Shaughnessy, 2002; Lewis & Sugai, 1999).

PBS is a preventative multi-leveled system of support that provides progressively more intensive interventions for students at varying levels of need. This three tiered model provides support at the primary, secondary, and tertiary prevention levels that increase in scope and intensity of supports. Decisions to provide more intensive interventions are based on data collection and analysis (Sugai et al., 2000).

Primary Supports

Positive behavior support addresses the needs of all students in the school at the primary prevention level. Primary supports are designed to promote protective factors that may prevent students from falling into risk (Kerr & Nelson, 2002). First, primary supports include teaching and supporting school wide expectations through the use of structured lessons and positive reinforcement. The structure of lessons includes presenting a rationale, modeling, clear expectations, guided practice, and feedback (Greenwood, 2001). After expectations are taught, students' demonstrations of these

behaviors are reinforced through positive statements or tangibles paired with verbal praise (e.g. reward ticket paired with “*thank you for raising your hand and waiting to be called on*”). Second, routines and setting procedures are developed to avoid problems that arise from scheduling, monitoring, and architectural flaws (Scott & Caron, 2005; Sugai & Horner, 1999). For example, schedules can be adjusted to reduce the traffic in hallways in problem areas or teachers can be assigned to stand outside of their classroom doors during these high traffic times. Third, classroom procedures are developed to ensure supervision is arranged, order is maintained, and motivation is addressed in specific teachers’ classrooms (Sugai & Horner, 1999). Finally, individual student procedures are put in place to provide extra resources to support the small percentage of students (5 to 7%) who exhibit the majority (50% or more) of the behavioral challenges in the school (Sugai & Horner, 1999). The purpose of primary supports is to prevent the need for more intensive secondary or tertiary supports. While primary prevention efforts are successful for the majority of the student population, approximately 10 to 20 percent of the student population will need secondary or tertiary supports (Lewis & Sugai, 1999).

Secondary Supports

Another key component of the PBS model is the collection of school wide data to identify students who do not respond to the primary prevention efforts and are in need of additional support. As many as 10% of a school’s population may be in need of secondary level prevention efforts (Scott & Caron, 2005; Sugai et al., 2000). Secondary supports can be provided to students in small group or one-on-one sessions to teach appropriate social skills or specific academic skills (Scott & Caron, 2005). The focus of

secondary interventions is often on simple problem behaviors (behaviors that are not dangerous, complex or intense). After students are provided instruction on appropriate replacement behaviors or specific academic skills, they are provided simple prompts and reinforced for performing appropriate academic and/or social skills (Scott & Caron).

Schools that implement systematic behavior screeners to identify students at risk for externalizing, internalizing, or co-morbid disorders can provide secondary behavioral supports early in a student's educational career so that behaviors do not develop into more serious problems such as antisocial behavior or substance abuse (Kerr & Nelson, 2002). In addition to behavioral screeners, schools can implement school-wide academic screeners to identify students who lack key academic skills such as phonemic awareness or writing. Addressing academic deficits at the prevention stage could prevent the need for more intensive, time consuming, and monetarily taxing interventions. In addition, early academic supports may prevent students from being referred to special education. Although primary and secondary prevention efforts are successful in addressing the needs of the majority of the students in a school, a small number of students remain in need of even more intensive prevention efforts (approximately 1% - 7%; Lewis & Sugai, 1999; Sugai et al., 2000).

Tertiary Supports

Some students exhibit chronic challenging behaviors that warrant greater attention and effort. Within the context of a PBS model, these students are identified through systematic academic and behavioral screeners as being non-responsive to primary and secondary supports. Tertiary interventions can be delivered to students with multiple risk

factors. Students at this level receive individualized assistance often in the form of a Function Based Interventions (FBI; Kerr & Nelson, 2002). Student support at the tertiary level involves intensive individualized supports with ongoing evaluations. It is imperative that schools implement systematic school wide behavioral and academic screeners to identify and intervene early with students who may be in need of secondary or tertiary supports.

While the under identification of students with internalizing behavior patterns is concerning, this problem can be addressed efficiently within the context of a PBS model (Lane, in press). Once students are identified as at risk for behavior and/or academic concerns, teachers must have available, empirically validated interventions (e.g., Peer Assisted Learning Strategies; PALS; Fuchs, Fuchs, Mathes, & Simmons, 1997 and Self-Regulated Strategies Development; SRSD; Harris & Graham, 1996) to address these concerns. More importantly, teachers need interventions that address both behavioral and academic concerns. For example, students with internalizing behavior patterns are characterized by an inability to self-regulate behavior (Gomez, Baird, & Jung, 2004). An intervention that addresses this behavioral characteristic while teaching key academic skills could provide greater long term benefits to the child by promoting maintenance of both behavior and academic outcomes.

Self-Regulation

Children who exhibit behavioral concerns are characterized by an inability to self-regulate emotional and behavioral responses to their environments (Gomez, Baird, & Jung, 2004). This is evident in the definition provided by IDEA of inappropriate feelings

or behaviors under normal circumstances, the tendency to develop fears or physical symptoms associated with personal or school problems, and a pervasive mood of unhappiness. For students with internalizing behavior patterns, the inability to self-regulate emotional responses may manifest in withdrawal from social situations and an inability to access academic instruction. In a review of the literature on the outcomes of self-management strategies for students with EBD, Nelson, Smith, Young, and Dodd (1991) found self-regulation strategies to be effective in improving the outcomes of this population.

While students with EBD demonstrate difficulties in self-regulation of behavior and emotions, students who exhibit poor writing skills exhibit an inability to self-regulate the complex writing process (Graham, Harris, MacArthur, & Fink-Chorzempa, 2003), lack knowledge of writing processes (Graham, Schwartz, & MacArthur, 1993), and develop a negative attitude about writing and themselves as writers (Harris & Graham, 1999). While past studies of writing interventions for students with EBD have focused on spelling and punctuation (Langone, Levine, Clees, Malone, & Koorland, 1996; McLaughlin, 1992) or simple paragraph writing (Glomb & West, 1990; Schloss, Harriman, & Pfefier, 1985), it is imperative that self-regulatory procedures (a common thread addressing both behavioral and writing deficits) be addressed.

Self-regulatory procedures have been used successfully to teach arithmetic (Levondoski & Cartledge, 2000), reading (Carr & Punzo, 1993), and writing (Lane, Harris, Graham, Weisenbach, Brindle, & Morphy, in press) to students with or at risk for EBD. Self-Regulated Strategies Development (SRSD; Harris & Graham, 1996) seems particularly appropriate for students with or at risk for EBD since it combines explicit

instruction in self-regulation with strategy instruction. Students receive instruction in how to regulate emotions and behavior during the writing process while learning the strategy for writing essays.

Self-Regulated Strategies Development

SRSD is a model used to improve students' strategic behaviors across many content areas and is founded on four major theoretical models. Michenbaum's (1977) cognitive-behavioral intervention model, Vygotsky's (1978) theory of the social origin of self-control and development of the mind, Brown, Campione, & colleagues' (1981) work on the development of self-control, metacognition, and strategies instruction, and Deschler and Schumaker's (1986) work on the support of acquisition techniques for strategies with adolescents with LD provided the foundation for the SRSD model (Swanson, Harris, & Graham, 2003).

SRSD instruction for writing is designed to supplement the core writing curriculum through three primary goals. The first is to teach students general and genre specific strategies to plan and compose. The second is to teach and support students in self-regulatory procedures (i.e., self-talk) to regulate their behavior during the writing process. Finally, SRSD incorporates motivational components such as supporting development of self-efficacy and positive attributes. These components are critical to addressing the needs of students with or at risk for EBD since they often struggle with self-regulation and motivation.

There are several characteristics of SRSD instruction that are critical in addressing the writing deficits of students with limited writing abilities (Graham & Harris,

2003). First, strategies and writing knowledge are explicitly taught. Second, interactive learning between the student and teacher is embedded throughout lessons. Students become active participants in the learning process. Third, SRSD instruction is individualized to meet the various needs of different students. For example, in the current study, a student had trouble remembering the word “organize” in the mnemonic POW (*Pick my idea, Organize my notes, Write and say more*). When “Organize” was changed to “Order,” the student had no trouble remembering and using “Order my notes.” Fourth, instruction is criterion based instead of time based. Students progress through lessons at their own pace. Lessons can be repeated as many times as needed to reach criterion before progressing to future lessons. Instruction continues until students can independently generate notes and produce an essay that includes all major elements without prompts from the instructor. Finally, SRSD instruction is an ongoing process that introduces new skills while building on previously taught skills.

SRSD instruction for writing is taught through six nonlinear instructional stages. While introduced in successive stages, the SRSD instructional stages for writing (*Develop and activate background knowledge, Discuss the strategy, Model the strategy, Memorize the strategy, Support the strategy, and Independent practice*) can be reordered, combined, or modified to meet individual student needs (Graham & Harris, 2003). For example, *Memorize the strategy* is introduced in lesson 1 and practiced throughout each lesson through a game called “Rapid Fire” (Figure 1). Students flipped cards, each with one letter of the mnemonic POW and TREE, and try to say what each letter stands for as quickly as possible. Students play memorization games using the Rapid Fire cards throughout instruction until the strategies are memorized. Self-regulation procedures are

embedded throughout instruction. Students are taught self-monitoring, goal setting, self-reinforcement, and self-instruction procedures.

In the stage, *Develop background knowledge*, teachers work collaboratively with students to develop the knowledge and skills required to understand and use the strategies and self-regulatory procedures. For persuasive writing, students are introduced to the mnemonic POW and TREE (*Topic sentence, Reasons, Ending, Examine*). Students are taught to tell what they believe, give at least 3 reasons for this belief, provide an ending sentence that “wraps it up right,” and examine the essay to see if they have all the essential elements and have included transition words. The mnemonic TREE is taught using a picture of a tree with each part described in relation to the tree (Figure 2). The topic sentence is like the trunk; everything should be related to the topic sentence. The reasons are like the roots; the more you have, the stronger your tree will be. The ending is like the ground surrounding the tree; it wraps it up right. *Examine* is portrayed through a picture of a girl who is looking at the tree through a telescope.

In the stage, *Model it*, the teacher models the use of the strategies while verbally employing self-statements and instructions. Self-instruction includes (a) problem definition, (b) problem planning, (c) strategy use, (d) self-evaluation, (e) error correction, (f) coping, (g) and self-reinforcement statements (Graham & Harris, 2003). Students develop and record self-statements for their personal use. Modeling can be repeated until students grasp the concept of strategy use and self-regulatory procedures.

In the *Memorize it* stage, the steps of the strategies and the mnemonics for remembering them (POW + TREE) are memorized. In addition, students memorize their self-statements. Students do not have to remember exact wording as long as the meaning

is maintained. The Rapid Fire game, described earlier, is used to help students memorize the mnemonics.

In the stage, *Discuss it*, students are given a previous writing sample and asked to determine how many elements were included. Students and teachers discuss past and current performances and set goals for future writing tasks. This stage (previously taught after *Develop background knowledge*), was moved to later lessons for students with EBD since Adkins (2005) found that students with EBD had a difficult time with self-evaluation prior to learning the strategy. The purpose and benefits of the target writing strategies are discussed as well as how and when to use them. Students are taught to monitor their progress by graphing the number of essay elements on a picture of a rocket that is divided into five sections (a topic sentence, three reasons, and an ending). The rocket is surrounded by stars and the student can color in a star for each transition word or additional reason that is used in the essay. Goals are set to write essays that are fun to write, fun for others to read, make sense, use transition words, and include all essay elements.

In the *Support it* stage, students practice writing essays using the strategies, self-statements, and self-regulatory procedures with progressively less prompting from the instructor. This stage is repeated until the students can produce essays independently with all the essential elements. Students should also be able to produce planning notes without prompting before progressing to the final stage of *Independent performance*.

During *Independent performance*, students are able to use the taught strategies to plan and write an essay without prompts from the instructor. Goal setting and self-assessment are faded at this time.

SRSD has been empirically validated with students with disabilities (Graham & Harris, 1989) and those with poor writing skills (Harris, Graham, & Mason, 2006). In a recent meta-analysis of research on SRSD studies for writing, Graham and Harris (2003) evaluated 19 SRSD studies for writing including both group ($n=6$) and single subject ($n=13$) designs. Studies were conducted from 1985 to 2003. Graham and Harris found SRSD highly effective in improving the writing quality ($ES=1.47$; $PND=97\%$), number of writing elements contained in an essay ($ES=1.87$; $PND=92\%$), scores on a story grammar scale ($ES=3.52$; $PND=100\%$), and essay length ($ES=2.07$; $PND=82\%$) in both group design studies and single subject design studies for students with learning disabilities, poor writers, and average performing students. Furthermore, maintenance effects were strong with average effect sizes ranging from 0.74 (quality) to 1.60 (writing elements) and PND ranging from 89% (story grammar) to 100% (quality and length).

In addition to presenting support for the strong impact of SRSD instruction for writing and maintenance effects, SRSD has proven successful in generalizing to other persons or settings ($PND=100\%$ for writing elements and story grammar) and genres ($ES=0.86$ for quality, $ES=1.23$ and $PND=84\%$ for writing elements, $ES=0.93$ for length, $PND=75\%$ for story grammar). Genres were tested across narratives, informative writing, stories, and essays. It is important to note that data on generalization to other genre were only available for poor writers and students with LD. In addition, generalization was tested across persons (researcher to teacher) and settings (quiet room to classroom setting).

In a more recent meta-analysis of the effects of strategy instruction on students' writing performance, Graham (2006) examined 39 experimental studies (20 group design

and 19 single subject design) at post instruction and maintenance time points across student type, grade level, genre, cognitive process, instructor, and type of intervention. Only studies conducted between the years 1980 and 2006 were included in this meta-analysis. Strategy instruction was not limited to SRSD instruction and was defined as teaching planning, revising, or editing and including a strategy such as modeling. In addition, instruction had to take place for at least 3 days with students progressing toward independent use of the strategy.

Although all of the studies in this meta-analysis utilized strategy instruction for writing, great variation existed. First, students ranged from second to twelfth grades. Second, student writing abilities ranged from poor to good writers as well as students with disabilities to students without disabilities. Third, strategies were taught to improve various writing tactics such as planning, revising, editing, or a combination of these. Fourth, strategies were taught using different types of writing including stories, personal narratives, persuasion, compare-and-contrast, explanation, enumeration, sequential, and paragraphs. Fifth, instructors included research assistants, researchers, or teachers. Finally, the approaches used to teach the strategies varied. SRSD was the most common strategy used ($n=22$; 56%). The other strategies instruction approach included parts (but not all) of the stages of SRSD instruction. Furthermore, none were criterion based nor were self-regulatory skills taught.

Findings were consistent with earlier findings (Graham & Harris, 2003), with strong overall effect sizes for both group ($M=1.15$; $SD=1.44$) and single subject (Percentage of Non-overlapping data points; $PND = 89\%$; $SD=19\%$) design studies at post instruction. Maintenance effects were also similar with $M=1.32$ ($SD=0.93$) for group

design studies and $PND = 93\%$ ($SD = 16\%$) for single subject design studies. In addition to evaluating effects sizes for post and maintenance time points, Graham (2006) evaluated effect sizes across student type (students with learning disabilities, poor writers, average writers, and good writers), grade (elementary versus secondary), genre (narrative versus expository), process (planning versus revising), instructor (graduate assistant or researcher versus teacher), and instruction (SRSD versus other) for both single subject and group design studies. No differences were found in student type, grade level, genre, and cognitive process. In other words, strategies instruction for writing was effective (a) for students with poor, average, or good writing skills, (b) across all grade levels, (c) across genres, and (d) when teaching planning, revising, or a combination of both. While no differences were found in instructor for group design studies, PND 's were much larger for teachers ($p = .06$) in the single subject design studies. In comparing SRSD to other strategy instructions, no significant differences were found in single subject design studies; however, significant differences were found in group design studies ($p < .02$) with SRSD having effect sizes nearly twice that of other instruction types. For quality outcomes, SRSD group design studies had large effect sizes ($M = 1.51$; $SD = 0.80$) at post intervention; while other studies produced only moderate effects ($M = 0.46$; $SD = 0.33$) at post intervention for quality.

In summary, SRSD has been shown to be highly effective in improving the writing skills of students of various abilities, grade levels and instructors. While the evidence for SRSD for writing instruction is evident in upper elementary, middle and high school in over 30 studies, only a few studies have been conducted to date with lower elementary school children. Studies evaluating SRSD for writing in lower elementary

grades are presented next. Then, more specifically, studies conducted with young elementary students at risk for, or with, EBD are summarized.

SRSD Instruction in Lower Elementary Grades

Few studies have been conducted to date evaluating SRSD for writing instruction with elementary students. Five studies have been conducted evaluating SRSD instruction on the writing performance of early elementary students with writing concerns (Graham, Harris, & Mason, 2005; Harris, Graham, & Mason, 2006; Saddler, Moran, Graham, & Harris, 2004) and both with and without LD (Danoff, Harris, & Graham, 1993; Sexton, Harris, & Graham, 1998). First a brief overview of each study is presented. Next, studies are evaluated according to participants, setting, interventionist, genre, dependent variables, results, and validity.

Overview of SRSD Studies Conducted in Elementary Grades

Graham, Harris, and Mason (2005). Graham et al. (2005) utilized a group design study to evaluate the effects of SRSD instruction for story and persuasive writing on time, quality, number of words written, and basic SRSD elements. Participants were 73 third grade students with deficits in writing as indicated by performing at or below the twenty-fifth percentile on the TOWL-3. Students were randomly assigned to one of three conditions (SRSD alone, SRSD plus peer supports, or comparison).

Students in the SRSD only condition received SRSD instruction for story writing followed by SRSD instruction for persuasive writing. Students in the SRSD plus peer

support condition also received SRSD instruction in story and persuasive writing; in addition, students were told that they would be working as partners to help each other apply the learned strategies in other settings. Students then supported one another by (a) identifying other places or instances where they could use the strategies they were being taught, (b) discussing how they could modify a strategy for an identified situation, (c) reminding and helping one another as needed, (d) reporting the amount of assistance they gave one another to the instructor, and (e) charting the assistance they gave each other.

Students in the comparison condition received regular classroom practices. Regular classroom practices were determined through teacher interviews about classroom writing practices. Further evidence of classroom writing practices was obtained through observations of teachers during writing instruction. Regular classroom practices were based on a Writers' Workshop model (Calkins, 1986; Graves, 1985) and included (a) setting up routines for planning, writing, revising, editing, and publishing, (b) conferencing with students about writing, (c) designating time for students to share papers with peers, and (d) conducting mini-lessons. Results indicated that students in either of the SRSD conditions performed significantly better than students in the comparison condition on time students allotted to composing both stories ($p < .003$; $ES = 2.17$ for SRSD only and $ES = 1.73$ for SRSD plus peer support) and persuasive essays ($p < .000$; $ES = 1.88$ for SRSD only and $ES = 2.34$ for SRSD plus peer support), length of stories ($p < .000$; $ES = 3.23$ for SRSD only and $ES = 2.29$ for SRSD plus peer support) and length of essays ($p < .000$; $ES = 2.15$ for SRSD only and $ES = 1.83$ for SRSD plus peer support), story elements ($p < .000$; $ES = 1.79$ for SRSD only and $ES = 1.76$ for SRSD plus peer support), persuasive elements ($p < .003$; $ES = 2.04$ for SRSD only and $ES = 1.46$ for

SRSD plus peer support), story quality ($p<.05$; $ES=2.42$ for SRSD only and $ES=1.90$ for SRSD plus peer support), and essay quality ($p<.000$; $ES=2.80$ for SRSD only and $ES=2.14$ for SRSD plus peer support).

Danoff, Harris, and Graham (1993). Danoff et al. (1993) used a multiple baseline design across 3 participant pairs with multiple probes during baseline to assess the effectiveness of SRSD instruction on story writing of students with and without LD. Students were placed in pairs (one with LD, one without LD) for each leg of the study. After assessing students' writing abilities using multiple probes during baseline, students received nine to ten lessons in SRSD for story writing. Lessons were stagger-started across pairs of students. Once students in the first pair reached criterion, the second pair of students were given instruction.

Post assessments indicated substantial increases in the story grammar element score (from baseline levels of 3.7 to 5.3 to post levels of 12.3 to 16.0), elements contained in the story (from baseline levels of 2.2 to 4.3 to post levels of 6.3 to 7.0), story length (from baseline levels of 90 to 188 to post levels of 177 to 494), and strategy usage. While story length improved for all students from baseline levels to post intervention time point, 2 fifth grade students with LD did not maintain in length of story. Mixed effects were found for story quality with 1 fifth grade student with LD improving quality at maintenance only, 1 fifth grader improving at post, but not during generalization or maintenance, and fourth grade students not showing pronounced changes in quality. Self-efficacy scores rose for all students in the study from baseline levels of 45 to 98 to post

instruction levels of 66 to 100. In addition, social validity interviews indicated positive statements about the SRSD instruction.

Sexton, Harris, and Graham (1998). Sexton et al. (1998) also utilized a multiple baseline design across participants with multiple probes during baseline to assess SRSD instruction on the writing outcomes of fifth and sixth grade students with learning disabilities. While Danoff et al. (1993) assessed SRSD for story writing, Sexton et al. assessed SRSD for persuasive writing. Six students identified as at risk for writing difficulties according to the TOWL-3 were assigned to one of three legs (2 students in each leg). Students in the first leg met criterion before students in the next leg were introduced to SRSD instruction.

All students exhibited substantial improvements in functional essay elements (160% to 375% more elements during post essays than during baseline essays) and length (increases of 120% to 290% from baseline to post intervention). As with Danoff et al. (1993) improvements in quality were evident with the majority of students. Increases in quality scores from baseline to post instruction time points ranged from 151% to 344%. Only two students exhibited quality scores during post instructional probes that overlapped with baseline probes. Maintenance probes indicated decline in performance with 2 students returning to baseline levels of performance on functional essay elements and quality. Only 2 students were administered generalization probes by their classroom teacher both pre and post intervention. Two other students were given baseline generalization probes by their classroom teacher; however, post probes were not administered due to absences and interruptions in the schedule caused by school events.

The authors did not state why the third pair of students did not receive maintenance probes. Post instruction probes indicated generalization to the general education setting when administered by the classroom teacher with increases in functional elements included (from 2 and 6 on the baseline probe to 7 and 8 on the post instruction probe) and quality (from a score of 2.0 and 3.5 on the baseline probe to 4.5 and 5.0 on the post instruction probe).

Saddler, Moran, Graham, and Harris (2004). Saddler et al. (2004) utilized a single subject multiple baseline across participants with multiple probes during baseline design to evaluate the effects of SRSD for story writing on the number of story elements, quality, and length of stories produced by second grade students at risk for writing concerns. Students were identified as at risk (twenty-fifth percentile or below) according the TOWL-3 screener Story Construction subtest. Six students were randomly paired and placed in one of three legs of the multiple baseline design. All students were African American and three were male. The general education teachers implemented a writers' workshop as traditional writing instruction. All students were taught SRSD for story writing 25 min a day, three days a week, until master was reached. Mastery was considered successful completion of two consecutive stories containing at least six of the seven story elements. Fidelity of SRSD instruction was obtained through a checklist of instructional components completed by the SRSD instruction during each lesson. In addition, 33% of the instructional lessons were tape-recorded and listened to by an outside observer to determine the number of instructional components addressed in lessons. Fidelity was high from both perspectives as evidenced by mean scores of 99%

and 97% respectively. Dependent measures of story elements, quality, and length were collected pre-intervention, post-intervention, and at maintenance. In addition, generalization probes (to a different genre, personal narratives) were collected pre and post-instruction. All students increased the number of story elements included in stories from baseline to post-intervention probes with results maintaining. In addition all but one student increased the number of words written in post-instructional stories and improved the quality of stories from baseline levels. Moreover, students generalized the effects to a different genre as indicated by improvements from baseline to post-intervention for personal narratives.

Harris, Graham, and Mason (2006). Harris et al. (2006) utilized a group design study to evaluate the effects of SRSD for story and persuasive writing on the amount of time to write the paper, number of words written, quality of the paper, and basic SRSD elements of 66 second-grade students with deficits in writing as indicated by risk status on the TOWL-3. Students were randomly assigned to SRSD alone, SRSD plus peer supports, or a comparison condition.

As in Graham et al. (2005), students in the SRSD only condition received SRSD instruction for story writing followed by SRSD instruction for persuasive writing. Students in the SRSD plus peer support condition received SRSD instruction in story and persuasive writing in addition to instruction on working with partners to generalize the strategy to different settings by supporting each others' self-monitoring on the transfer strategy sheet. Students in the comparison condition received regular classroom practices. Regular classroom practices were determined through teacher interviews, teacher

completed surveys, and observations of classroom writing practices. Teachers and students were observed (a) setting up composing routines for planning, writing a first draft, revising, editing, and publishing, (b) writing poems, personal narratives, book reports, journal writing, and descriptive writing, (c) student selection of writing content, and (d) conferencing with teachers.

Results indicated that students in either of the SRSD conditions performed significantly better than students in the comparison condition on time students allotted to planning both stories and persuasive essays with students in the SRSD conditions spending about 5 minutes and students in the control conditions spending less than one fourth of a minute. Students in the SRSD conditions ($M=5.77$ and 6.27 for story and $M=4.64$ and 6.00 for persuasive) also performed significantly better than students in the control condition ($M=3.14$ for story and 1.55 for persuasive) on number of essential elements included ($p<.001$). Furthermore, students in both SRSD conditions ($M=3.37$ and 3.45 for story and $M=4.23$ and 4.82) for persuasive performed significantly better on quality ($p<.05$) than students in the control conditions ($M=2.27$ on stories and $M=1.77$ on persuasive essays) with no significant differences in the two SRSD conditions. For length, students in the SRSD condition plus peer support wrote significantly longer stories at post intervention ($p=.036$; $M=75.27$) and maintenance ($p=.009$; $M=55.27$), than students in the comparison condition ($M=45.32$ at post and $M=34.64$ at maintenance). However, no significant differences were found in length of stories between the two SRSD conditions or between the SRSD only and the comparison condition at post test. In contrast, both SRSD conditions resulted in significantly longer persuasive essays at post

intervention ($M=52.86$ and 50.55) than the comparison condition ($M=28.50$). There were no significant differences between the groups in the generalization persuasive probes.

Synthesis Across Studies

The five previously mentioned studies are evaluated further in the following paragraphs. Studies are evaluated according to participants, setting, interventionist, genre, dependent variable, results, and validity.

Participants. Participants in the above mentioned studies were categorized by number, gender, ethnicity, grade level, student type, and nomination into the study. First, the number of students ranged from a low of 6 in the single subject design studies (Danoff et al., 1993; Saddler et al., 2004; Sexton et al., 1998) to a high of 73 for the group design studies (Graham, et al., 2005). Second, all studies contained both male and female participants. With the exception of two studies (Danoff et al., 1993; Saddler et al., 2004), more participants were male than female. Third, the four studies that reported ethnicity had a higher percentage of minorities (range 83% to 100%) than Caucasian students. Fourth, grade levels ranged from second (Harris, et al., 2006; Saddler et al., 2004) to fifth and sixth (Sexton et al., 1998). Fifth, the group design studies had a heterogeneous grouping of students with student types including those with LD, speech and language disorders, ADHD, and emotionally disturbed (ED); however, all students were identified as having writing concerns. Students in the single subject design studies also had writing concerns with half of the students in Danoff et al. (1993) also having learning disabilities and all of the students in Sexton et al. (1998) having learning disabilities. Finally, students were identified for inclusion into the study by teacher

nominations (Danoff et al., 1993) and/or falling below normative range on the TOWL-3 (Graham et al., 2005; Harris et al., 2006; Saddler et al., 2004; Sexton et al., 1998).

Setting. Participants in all five studies were receiving educational services in the general education setting at the time of identification for participation in the studies. However, students were pulled out of the classroom setting for SRSD instruction in all but one study. In Danoff et al., (1993), students received SRSD instruction in the general education classroom during the regularly scheduled Writer's Workshop.

Interventionist. In four of the studies, graduate students (former teachers) conducted the SRSD instruction for writing (Graham et al., 2005; Harris et al., 2006; Saddler et al., 2004; Sexton et al., 1998). In Danoff et al., (1993), students received SRSD instruction from the special education teacher who was conducting the Writer's Workshop with the general education teacher prior to implementation of the study.

Genre. Instructors in the group design studies taught both story and persuasive genres to students in the SRSD conditions through the use of the mnemonic W-W-W, What=2, How=2 (Who is the main character?, When does the story happen?, Where does the story take place?, What does the main character want?, What happens then?, How does the story end?, and How do the characters feel?) and the mnemonic TREE (Topic sentence, Reasons, Examine, Ending). In the single subject design studies, students were taught story writing (Danoff et al., 1993; Saddler et al., 2004) and persuasive writing (Sexton et al., 1998).

Dependent variables. All of the studies evaluated writing as an outcome measure. Graham et al. (2005) evaluated the writing skills in story, persuasive, personal narrative, and informative writing, both pre and post instruction. Compositions were scored according to amount of time the students took to write the composition, number of words written, quality of the composition, and basic elements of the genre that were included in the composition. In addition self-efficacy was measured using five of the ten items on a scale developed by Graham et al. (1993). Danoff et al. (1993) evaluated many of the same outcome measures as Graham et al. (number of words written, quality, strategy usage, self-efficacy). In addition Danoff et al. evaluated story grammar using the story grammar scale developed by Graham and Harris (1989) to assess the inclusion of the following elements: main character, locale, time starter event, goal, activities, ending, and reaction. Furthermore, social validity interviews were conducted with the student participants.

Sexton et al. (1998) evaluated the effects of SRSD instruction on planning time, length of essay, essay elements, quality, and strategy use. In addition, attributional beliefs about writing were assessed using an adaptation of the scales developed by Bugental, Whalen, and Henker (1977) and Reid and Borkowski (1987). Furthermore, a social validity interview was conducted with students. As with Graham et al., Harris et al. (2006) evaluated writing skills in story, persuasive, personal narrative, and informative writing, both pre and post intervention. The same outcome measures were also utilized; compositions were scored according to amount of time to write the paper, number of words written, quality of papers, and basic elements of SRSD included in the paper. Self-efficacy was also assessed.

Results. Results indicated strong effects of SRSD instruction for students with writing difficulties in elementary grades for both story and persuasive writing with students outperforming those in comparison conditions at post test (Graham et al., 2005; Harris et al., 2006) and *PND*'s of 100% for essential elements from baseline to post intervention probes (Danoff et al., 1993; Saddler et al., 2004; Sexton et al., 1998). Improvements were found in number of words written, quality of papers, elements included, time it took to write a paper, and strategy use.

Validity. All studies incorporated methods to ensure the validity of the results. First, treatment fidelity checks were completed by either instructors alone (Danoff, et al. 1993; Sexton et al., 1998) or both instructors and an outside person (Graham et al., 2005; Harris et al., 2006; Saddler et al., 2004). Instructors evaluated their teaching of SRSD strategies by completing a check list of essential instructional components as completed or not completed at the end of each lesson. To collect fidelity checks using an outside person, lessons were tape recorded, and an outside person listened to and determined, via a checklist of instructional components, the inclusion or omission of each component. Instructors implemented SRSD strategies with high fidelity (range 91%; Harris et al., 2006 to 99%; Saddler et al., 2004). Second, random assignment was used to assign students to treatment conditions (Graham et al.; Harris et al.). Third, papers were rescored by a second person to determine reliability of scoring. Percentage of papers rescored ranged from 50% (Graham et al., 2005) to 100% (Danoff et al., 1993; Sexton et al., 1998) with interrater reliabilities ranging from .77 (holistic rating scale; Danoff et al.) to .99 (Graham et al.; Harris et al.).

SRSD instruction for improving persuasive and story writing for students with writing deficits who also have co-occurring disabilities such as LD has resulted in meaningful improvements in the length, time to write, quality, strategy use and inclusion of story or essay elements in student papers. While SRSD has been shown to improve the writing skills of students with learning disabilities, very little has been done to determine the effects of SRSD instruction for writing with students with or at risk for EBD.

SRSD Instruction for Students With, or at Risk for, EBD

Five studies have been conducted to date evaluating SRSD for writing with elementary students identified as, or at risk for, EBD. Only one of these studies evaluated SRSD for writing within the context of PBS model (Lane et al., in press). First, an overview of each study is presented. Second, studies are synthesized according to participants, setting, interventionist, genre, dependent variables, results, and validity.

Overview of SRSD for Students With, or at Risk for, EBD in Elementary Grades

Several studies evaluating the effects of SRSD for writing have been conducted with students who have writing concerns in the lower elementary grades. However, only five have evaluated the effects of SRSD for writing with students with or at risk for EBD. The following paragraphs present an overview of Adkins (2005), Lane, Harris, Graham, Weisenbach, Brindle, and Morphy (in press), Lienemann, Graham, Leader-Janssen, and Reid (2006), Mason, Snyder, Sukhram, and Kedem (2006), and Mason and Shriner (in press).

Mason, Snyder, Sukhram, and Kedem (2006). Mason et al. (2006) evaluated the effects of TWA (*Think before reading, think While reading, think After reading*) + PLANS (*Pick goals, List ways to meet goals, And, make Notes and Sequence notes*) for expository reading and writing of nine fourth and fifth grade students with various disabilities (EBD, LD, speech/language delayed, typically developing, and at risk for EBD) through a single subject multiple probe design across subjects. The researcher taught the TWA + PLANS instruction to participants. Thirty percent of the lessons were tape recorded and evaluated for treatment fidelity. Outcome measures included outline, oral retell, written retell, quality, number of words written, and treatment acceptability. Treatment acceptability was assessed through oral interviewing of students. Interviews were tape-recorded to ensure accuracy and integrity.

Students' performances on the oral retell outcome measures varied with improvements at post instruction as indicated by all students orally stating at least three main ideas (criterion level); however, only five students maintained levels above initial baseline levels at long-term maintenance with score baseline scores ranging from 0 to 2 and long term maintenance score ranging from 2 to 4 main ideas. All but 2 participants improved in writing performance for expository retell essays. Baseline levels ranged from 0 to 3 with post instructional probes increasing to a range of 1 to 6 (the highest score possible). All students who participated in long-term maintenance 9 ($n=6$) improved from 2 to 6 main ideas above their baseline levels. Quality scores, for both oral and written retell, also increased from baseline to post intervention with post instruction means 2.17 to 3.00 higher than baseline means. The mean difference in length of essays ranged from

53.47 to 107.47 from baseline to post instruction. All students indicated the TWA + PLANS strategy helped them to become better writers and readers.

Lienemann, Graham, Leader-Janssen, and Reid (2006). Lienemann et al. (2006) used a multiple baseline design across participants with multiple probes during baseline to evaluate the effects of SRSD for story writing on the number of story elements contained, number of words written, and quality of stories written for second grade students with various disabilities (Attention Deficit Hyperactivity Disorder, emotionally disturbed, LD, orthopedically impaired). All students were identified as being at risk for writing concerns according to the TOWL-3 Story Construction Subtest. The researcher conducted the lessons with 100% fidelity according to evaluations from an outside person. Twenty-five percent of the taped lessons were randomly selected for evaluation. SRSD for story writing resulted in improvements in number of story elements (from an average of 2.1 in baseline to 6.2 on post instructional probes), length (from an average of 28 words in baseline to 56 words on post instructional probes), and quality of writing (from an average of 1.8 on a 7 point scale in baseline to 3.3 on post instructional probes) for the majority of the students. In addition, 3 students generalized to story reading retell with scores increasing from a range of 1 to 3 during baseline to a range of 4 to 7.

Mason and Shriner (in press). Mason and Shriner (in press) taught six students with EBD in grades two through five to write persuasive essays using the SRSD strategy in a multiple baseline single subject design study. Participants were identified as EBD according to IDEA's definition and were receiving special education services (or

currently in the referral process) under the category of EBD. In addition to EBD classification, all students demonstrated problems with writing as indicated by having Individualized Education Plan (IEP) goals for writing. Students were grouped according to ages with one group comprising students 8 years to 9 years, 3 months old and the other group containing students 10 years, 1 month to 12 years, 6 months old. Students were being served in an inclusive setting that utilized an Inclusive Therapeutic Program (ITP) for students with EBD. ITP focuses on positive, proactive means of teaching social and academic skills to students with EBD.

Students were taught SRSD strategy for persuasive writing that included the mnemonics POW and TREE. Students' writing abilities were evaluated before and after instruction. Two doctoral level research assistants taught SRSD strategies for persuasive writing through the six stages of strategy acquisition described earlier in this chapter. Treatment fidelity was collected on 100% of the lessons by the instructor and by an outside person. The instructor completed a checklist of essential lesson components after each lesson. All lessons were video-taped and watched by an outside person who recorded the percentage of instructional steps completed. Fidelity of treatment was 100% from the instructor's perspective and 98% from the outside person's perspective.

Outcome measures included number of essay elements, quality, length, and number of transition words written. In addition, treatment acceptability from the student's perspective was collected. The number of essay elements included in baseline essays varied with the age groups. The younger students wrote no more than one part during baseline, while the older students wrote two to four parts. Both groups increased the number of essay elements included on instructional probes with younger students' scores

ranging from four to six and older students' scores ranging from five to eight. Post instructional probes dropped to a range of zero to 8 essay elements for the younger students and maintained the five to eight range for older students. The quality of essays improved from baseline ($M=.07$) to instructional probes ($M=4.91$), post-instructional probes ($M=4.44$), and maintenance ($M=4.00$) for the younger students. For the older students, improvements in quality were also obtained from baseline levels ($M=0.90$) to a mean of 5.77 during instruction, 4.89 after instruction, and 4.00 at maintenance. The length of essays improved greatly from baseline levels for both groups with number of words written increasing from a mean of 10.14 for the younger students and 33.25 for the older students to 47.33 and 79.31 words respectively during instruction, 68.11 and 65.78 words during post-instruction, and 52.00 and 54.50 words at maintenance. While no students used transition words on baseline essays, both groups included transition words during post-instruction ($M=3.25$ for the younger group and $M=4.00$ for the older group) and maintenance ($M=3.22$ and $M=3.33$ respectively).

Despite improvements in the quality and completeness of the students' arguments, maintenance and generalization outcomes were varied across participants. The variability increases in maintenance and generalization appeared to be a result of behavior rather than an inability to remember the strategy.

Adkins (2005). In an unpublished dissertation, Adkins (2005) evaluated the effects of SRSD for story writing on the number of words written, number of essential elements, and quality of stories written by 3 second and third grade students with EBD through a multiple baseline across participants design with multiple probes during baseline. SRSD

instruction resulted in longer stories that contained more story grammar elements than were used in baseline stories. Baseline stories contained averages of 1.7, 2.4 and 1.7 story elements during baseline. All post instructional probes contained 6 to 7 story elements. Improvements were also observed in the length of essays. Baseline essays contained no more than 16 words. The length of student essays increased by 55, 46, and 43 words from baseline levels. Quality of essays also improved from low baseline levels of no higher than 2 (out of a possible score of 8) to scores ranging from 3 to 6. In contrast with Mason and Shriner (in press), generalization probes also showed improvements in lengths and story parts of personal narratives with lengths remaining above 24 words and story elements remaining at or above 5.

Lane, Harris, Graham, Weisenbach, Brindle, and Morphy (in press). Only one study to date has evaluated the effects of SRSD on students at risk for EBD in second grade within a PBS model (Lane, et al., in press). Lane et al. (in press) evaluated the effects of SRSD on story writing performance of second grade students with externalizing or internalizing behavior patterns. Students were identified through systematic screenings for behavioral and writing deficits conducted by the school as part of their PBS plan. Only one of the six students was identified as having internalizing behavior patterns. Graduate research assistants taught students SRSD instruction for story writing in a one-on-one situation outside the classroom setting. Treatment fidelity was collected by an outside observer who watched 42% of instructional lessons. Treatment fidelity ranged from 94.44% to 100%.

Several writing outcomes were measured. Story prompts were given to students prior to intervention, after intervention, and at maintenance. In addition social validity was collected from the teacher and student perspectives. Results indicated strong effects as indicated by longer and more complete stories being produced as compared to stories in baseline conditions. The number of story elements during baseline ranged from 0 to 2.86. Mean scores at post instruction increased to 6 and 7. Length of stories increased from means of 7.67 to 34.33 in baseline to 34.67 to 113.67 during post instruction. Quality of stories increased from a range of 1.17 to 3.33 during baseline to 5.00 to 6.00 during post instruction. In addition, maintenance effects were noted for all students as indicated by scores well above baseline levels. One student, however, obtained a maintenance score lower than his post instructional scores and was therefore, given a booster session. His score returned to post-instructional levels after the booster session.

The strong effects of SRSD instruction for writing with students who have behavioral issues are promising. Unfortunately, only one student in Lane et al., in press, had internalizing concerns and collateral effects on behavior were not assessed. This is unfortunate given that students with internalizing and externalizing behavior patterns may not respond uniformly to intervention efforts. For example, Nelson and colleagues (2004) found, in a descriptive study, that students with externalizing behavior patterns had more pronounced writing deficits than students with internalizing behaviors. Therefore, it may be that students with internalizing behaviors are more responsive to SRSD compared to students with externalizing behaviors.

Synthesis Across Studies with Students at Risk for, or With, EBD

The above mentioned studies have provided evidence for large effects of SRSD for writing with students with or at risk for EBD. The similarities and differences in the previous studies are presented in the following chapters by comparing and contrasting study participants, setting, interventionist, genre, dependent variables, results, and validity.

Participants. The number of participants in the studies evaluating the effects of SRSD for students with or at risk for EBD ranged from 3 (Adkins, 2005) to 9 (Mason et al., 2006). The low numbers are to be expected in single case methodology and are common in low incidence populations such as EBD. All studies contained both male and female participants with all but one study (Lienemann et al., 2006) containing more males than females. Ethnicity ranged from a low of 33% minority (Lane et al., in press; Mason & Shriner, in press) to a high of 100% minority (Adkins, 2005). While all studies contained participants with or at risk for EBD, other disabilities included Attention Deficit Hyperactivity Disorder, Learning Disabled, orthopedically impaired, and speech and language delayed. Students were selected for participation in the study by the classroom teachers (Adkins, 2005; Lane et al., in press; Lienemann et al., 2006; Mason et al., 2006; Mason & Shriner, in press). Lane et al. (in press) utilized systematic mass screeners to identify students at risk for internalizing, externalizing, or comorbid concerns. All students were selected by teachers as having writing concerns. Writing concerns were confirmed using the TOWL-3 screener (Adkins, 2005; Lienemann et al., 2006; Lane et al., in press).

Setting. Prior to implementation of each study, participants were being served in self-contained settings (Adkins, 2005), inclusion settings (Mason & Shriner, in press), and general education settings (Lane et al., in press; Lienemann et al., 2006). One study did not report setting (Mason et al., 2006).

Interventionist. All five studies utilized a graduate student or other researcher to instruct students in SRSD strategy for writing. The lack of use of classroom teachers as interventionists is concerning. While many graduate students are certified and experienced teachers, the use of classroom teachers in instruction may provide greater maintenance and generalization effects (Graham, 2006).

Genre. Various genres were evaluated in the five studies. Story writing was evaluated by the majority (Adkins, 2005; Lane et al., in press; Lienemann et al., 2006). Mason et al., 2006 evaluated the effects of SRSD on written retell while Mason and Shriner (in press) evaluated the effects of SRSD for persuasive writing.

Dependent variables. Several dependent variables were evaluated. Writing outcomes included number of elements, number of words written, and quality (Adkins, 2005; Lane et al., in press; Lienemann et al., 2006; Mason & Shriner, in press). Additional writing variables that were evaluated included number of transition words (Mason & Shriner, in press), self-efficacy (Adkins, 2005), and oral and written retell (Mason et al., 2006). While Lane et al., (in press) evaluated social skills and problem behaviors using the Social Skills Rating System –Teacher version (Gresham & Elliott,

1990) at pre-intervention, none of the studies evaluated collateral effects on classroom behaviors such as engagement and disruptive behavior.

Results. As indicative of single subject designs, results were analyzed via visual inspection. Results were promising with improvements across measures, genres, and settings. According to writing outcome measures, participants improved in written retell, number of elements included, number of words written, and quality from baseline to post intervention probes. In addition, evidence is provided for generalization and maintenance of SRSD instruction with PND's ranging from 67% (Lienemann et al., 2006) to 100% (Adkins, 2005; Lane et al., in press) from baseline levels.

Validity. Validity was established through study designs, collection of treatment fidelity, and collection of social validity ratings. First, all studies utilized a multiple baseline design across participants to evaluate the functional relationship between SRSD instruction for writing and various writing outcome variables. Next, treatment fidelity was evaluated by an outside observer listening to taped lessons (Mason et al., 2006; Adkins, 2005; Lienemann et al., 2006; Mason & Shriner, in press) or by direct observation (Lane et al., in press). Researchers evaluated between 25% (Lienemman et al., 2006) and 100% (Mason & Shriner, in press) of the lessons. Fidelity of treatment implementation was above 94% for all studies.

The previous studies provide evidence for the strong effects of SRSD for writing with various student types (ie. LD, ADHD, EBD). In addition, the effects are consistent across settings and genre. While evidence is increasing for the use of SRSD for writing

development for students already identified as EBD, little has been done to evaluate the effects of SRSD for students *at risk* for EBD, particularly students with internalizing behavior patterns, with only one being conducted within a PBS model (Lane et al., in press). Students with internalizing behavior patterns are under identified (Gresham & Kern, 2004).

SRSD within the Context of a PBS Model

The PBS model provides the screening tools to identify and intervene with these students at the prevention stage. In addition to providing screening and identification of students at risk for behavior or academic concerns, the PBS model provides empirically validated interventions for use at the secondary or tertiary levels of prevention. To provide teachers with validated interventions, it is imperative for researchers to continue evaluating effective interventions for various student types. Since students with internalizing behavior patterns are characterized by an inability to self-regulate emotions, SRSD strategies for academic instruction seem a logical intervention for these students. In particular, SRSD for writing may have collateral effects on behavior since writing can provide an outlet in which students can express themselves (Graham, 2006). Despite the evidence of success of SRSD strategies for writing with students with EBD, only one study contained a student at risk for internalizing behavior patterns (Lane et al., in press). It is imperative that researchers further explore this relationship between self-regulation and academic and behavior outcomes for students at risk for internalizing behavior patterns as these students face pejorative outcomes (ie. rejection from peers, suicide; Gresham & Kern, 2004).

In the next chapter, methods used in a study evaluating the effects of SRSD for persuasive writing for students at risk for internalizing behavior patterns are presented. Participants, setting, instructional procedures, measures, and study design are described. Specifically, methods of identifying students with internalizing behavior patterns who also have limited writing skills are presented. Next, the instructional setting is described. Third, the independent variable, SRSD instruction for persuasive writing, is described. Then, descriptive and outcome measures and study design are presented.

CHAPTER III

METHOD

In this chapter, participant characteristics are described along with methods of identification and consenting. Next, data collection procedures and both descriptive and outcome measures are discussed. Then, the SRSD intervention is described. Finally, experimental design and statistical analyses are provided.

Participants

Participants were 6 second-grade students identified as at risk for internalizing behavior patterns and at risk for writing difficulties (inclusion criteria to follow). Five participants were female and all were Caucasian. Only one received special education services under the category of multiply handicapped (orthopedically impaired, learning disabled, and speech/language impaired); however, she received all services in the general education classroom as this school district utilizes the full inclusion model. Average estimates of cognitive ability, according to the Weschler Intelligence Scale for Children – IV screener (WISC-IV; Wechsler et al., 2004), ranged from 71.00 to 102.90 ($M = 86.96$, $SD = 13.07$). See Table 1 for additional participant characteristics.

Student (1) Kathy. Kathy, an 8 year old, was at risk for internalizing behaviors in the classroom setting although she indicated having friends at home. Kathy's cognitive

ability was in the average range. Although Kathy scored in the thirty-seventh percentile on the TOWL-3 writing screener, she indicated on the pre CIRP that she thought there were better ways to teach her to write than SRSD strategy. Kathy's teacher indicated on the SSRS that she had low average social skills ($SS=81$), while her parents indicated (on the parent SSRS) that Kathy had average social skills ($SS=96$). The teacher and parent also gave different perceptions of Kathy's problem behavior with her teacher rating her as having above average problem behaviors ($SS=114$). Kathy's parent rated her as having average problem behaviors ($SS=105$). Although Kathy was only in the second grade, she had already attended two schools.

Student (2) Bob. Bob, at risk for internalizing behavior patterns, was a 7 year, 7 month old male. Bob had average cognitive abilities according to the WISC-IV screener. Bob also had poor writing skills as indicated by his score in the ninth percentile on the Story Construction subtest of the TOWL-3 screener although he wrote 25 words. His teacher rated Bob as having lower than average social skills ($SS=72$) and higher than average problem behaviors ($SS=112$). Bob's parents did not return the SSRS. Bob exceeded normative cut-off scores on the SARS with 13 days of absence in the previous school year.

Student (3) Skylar. Skylar, 8 years, 2 months, had internalizing behavior patterns and slightly below average writing skills as indicated by performing in the thirty-seventh percentile according the TOWL-3. Skylar had low average cognitive abilities ($SS=74$) with low average social skills ($SS=86$) and high average problem behaviors ($SS=116$)

according to her general education teacher. While Skylar's parents rated her as having average social skills ($SS=106$), they rated her as having above average problem behaviors ($SS=121$). Skylar also had attended two schools since her start of school in kindergarten.

Student (4) Michelle. Michelle was a 7 year, 10 month old female with internalizing behavior concerns and writing concerns as indicated by performing in the ninth percentile on the Story Construction subtest of the TOWL-3; although she wrote 113 words. Michelle's cognitive ability was in the low average range. Michelle's teacher and parent both rated her as low average in social skills ($SS=77$). While her teacher rated her as average in problem behaviors ($SS=103$), Michelle's parent rated her as slightly above average in problem behaviors ($SS=110$). Michelle was the only student in this study being served by special education. She was being served under the category of multiply handicapped. Disabilities included orthopedically impaired, learning disabled, and speech and language impaired. The only modification to this intervention that she received was a lap top desk for writing as the table heights were not conducive for writing with the height of her wheel chair. Michelle not only had attended 2 schools in her short school career, she had 16 days of absences in her previous school year. As she has many physical complications associated with her disabilities, the days absent could be a result of multiple doctors' visits.

Student (5) Lisa. Lisa, 7 years, 1 month, was identified as having internalizing behavior patterns and low average writing abilities (thirty-seventh percentile on the TOWL-3). Lisa had low average cognitive abilities with similar social skills and problem

behavior ratings from the teacher and parent. Both rated Lisa as having low average social skills ($SS=81$ and $SS=91$, respectively). Problem behaviors were rated as high ($SS=123$ and $SS=121$, respectively). Lisa had more days absent in the previous year than any other student in this study ($n=22$).

Student (6) Ann. Ann was a 7 year, 10 month old female with average cognitive abilities, internalizing behavior patterns, and low average writing skills. Ann's teacher rated her as having average social skills ($SS=89$) and slightly above average problem behaviors ($SS=112$). In contrast, Ann's parents rated her as having above average problem behaviors ($SS=121$) and average social skills ($SS=96$).

Table 1. *Student Characteristics Pre-Intervention*

Variable	Student					
	Kathy	Bob	Skylar	Michelle	Lisa	Ann
Leg	1	1	2	2	3	3
General						
Demographics						
Age in years	8.00	7.07	8.02	7.10	7.01	7.10
Gender	Girl	Boy	Girl	Girl	Girl	Girl
Ethnicity	C	C	C	C	C	C
IQ	100	103	74	71	86	88
Screening (percentile)						
TOWL-3	37	9	37	9	37	37
SSRS-T						
Social Skills (SS)	81	72	86	77	81	89
Problem Behavior (SS)	114	112	116	103	123	112
Academic Comp (SS)	106	67	104	71	82	88
SSRS-P						
Social Skills (SS)	96	*	106	77	91	96
Problem Behavior (SS)	105	*	121	110	121	121
SARS						
Schools Attended	2	1	2	2	1	1
Days absent	8	13	8	16	22	6
Negative behavioral comments	1	0	0	0	0	0
Special education	No	No	No	Yes	No	No

Note. SS=Standard Score; TOWL-3=Test of Written Language; *=parent did not return form; C=Caucasian; IQ=intelligence quotient; SSRS-T=Social Skills Rating System–Teacher version; SSRS-P= Social Skills Rating System–Parent version; SARS=School Archival Record Search

Participant Selection Criteria

Four schools, located in a large, rural school system in Middle Tennessee, participated in the school-wide behavioral and academic screenings to identify students at risk for internalizing behavior patterns and writing concerns. Students were identified from three of the four rural elementary schools. This large school system serves more than 27,000 students with a wide range of socio-economic status. This is a high performing school system with attendance rates above 95% and achievement scores that rank among the highest in the state of Tennessee. Student teacher ratios are 19.9:1 for kindergarten through third grade with promotion rates above 99 percent. This school system utilizes a model of full inclusion for special education. All schools in the system are accredited by the Southern Association of Colleges and Schools (SACS). Professional employees are highly qualified as indicated by 55% having attained an educational level of a Master's Degree or higher and 34% having a Ph.D. or Ed.D.

The three schools that were invited to participate are representative of the school system as a whole. For example, all are located in rural settings with high academic performances on state mandated assessments. All three schools, containing study participants, serve students in grades kindergarten through fifth. In addition, all employ a three-tiered model of positive behavior support (PBS) that includes an extensive data monitoring system to monitor students' academic and behavioral progress.

Although each school community individualizes the PBS plan to fit the needs and characteristics of the school, all incorporate (a) teaching of student and staff expectations, (b) posters of school wide expectations found throughout the school, (c) tickets to reward students for appropriate behavior, (d) collection of data to inform practice, and (e) school

wide screeners to identify students in need of additional supports. Examples of expectations include (a) I will respect myself and others with my actions and words, (b) I will be a responsible citizen by listening carefully and following directions promptly, (c) I will be honest and fair in all that I do, (d) I will put forth my best effort, and (e) I will work with my group to get the job done. Teacher lead lessons were taught to students to ensure that school wide expectations are known and understood. Treatment fidelity of lessons was collected by outside persons to ensure each part of the PBS plan was being implemented with integrity. After students were taught school-wide expectations, they had the opportunity to earn tickets for demonstrating these expectations. Students were given tickets for demonstrating the taught school wide expectations in all school settings (i.e., classroom, hallway, cafeteria) by any staff member (i.e., principal, teacher, secretary). Tickets were then turned in for classroom or school-wide drawings for prizes (i.e. tangibles, time with the teacher, extra computer time). Each school collected data on the number of tickets handed out to students as well as information on attendance, tardies, state mandated tests, disciplinary referrals, and special education referrals. Data were analyzed to determine areas of focus for teaching expectations and revisions of the PBS plan. While the majority of students responded to the primary level of support (i.e. teaching of behavioral expectations, tickets), some were in need of additional support to reach their full potential. Each school utilized screeners to identify these students in need of secondary or tertiary supports.

As part of the school-wide PBS plan, the schools implemented systematic behavioral and academic screeners to identify students in need of secondary supports. Participants in this study were identified through the schools' PBS screening data.

Screening procedures are presented next, followed by a description of criteria for inclusion of students in this study.

Second-grade students were identified as having behavioral or writing concerns through each school's PBS data collection plan. Specifically, students who exceeded normative criteria on the Systematic Screening for Behavior Disorders (SSBD; Walker & Severson, 1992) and who also scored at or below the thirty-seventh percentile on the TOWL-3 were invited to participate. The systematic school-wide screening measures are described below.

Systematic Screening for Behavior Disorders. The SSBD (Walker & Severson, 1992) uses a multi-gating system for identifying students who are at risk for EBD. In the first stage teachers list, then rank order students on dimensions of internalizing or externalizing behaviors. In the second stage, teachers complete a rating scale on each of the top three students with internalizing concerns and the top three students with externalizing behavior patterns. The rating scale consists of a Critical Events Index (CEI) and a Combined Frequency Index (CFI). The CEI contains 33 items which are scored as occurrence or nonoccurrence of low frequency, high intensity behavior during the past month. Students receiving a score of one or more on the CEI progress to the third stage of the screener. The CFI combines 12 Adaptive Behavior ratings with 11 Maladaptive Behavior ratings to determine the extent of high frequency, yet low intensity behaviors. Each behavior is rated on a 5-point Likert scale ranging from never to frequently. Students can be identified as either moderate or high risk of internalizing or externalizing

behavior problems. Students who exceed normative criteria at the second stage proceed to the third stage of identification.

In the third stage, students are systematically observed in the classroom setting and on the playground. Academic engaged time and peer related social behaviors are coded during observations. This stage can be used to identify functions of behavior and appropriate intervention methods. Students who pass through the third stage should be referred for a formal assessment of EBD (Elliott & Busse, 2004). The multi-gated process of the SSBD is an excellent tool for screening for behavior disorders. It allows for more intense methods of screening for fewer numbers of students as only a percentage of students proceed to subsequent stages. This results in a timelier and monetarily efficient way to screen students.

The SSBD has been empirically validated for use in differentiating students with internalizing and externalizing behavior patterns (Gresham et al., 1999). Interrater agreements range between 0.90 and 1.00 (Walker & Severson, 1992). Specifically, for internalizing behavioral domains, test-retest correlation (*rho*) is .72 for Stage One teacher rankings, .81 for the Critical Events Index (Stage Two), and .90 for the Combined Frequency Index (Stage Two). In this study, the SSBD was used to identify students with internalizing behavior patterns as indicative of exceeding normative criteria in Stage Two of the internalizing behavior domain.

Test of Written Language-3. The TOWL-3 (Hammil & Larsen, 1996) assesses a child's ability to write a complete and interesting story through the Story Construction subtest. Students are given a picture prompt and 15 min to complete a story. This subtest

was used to identify students who are struggling writers. Specifically, students scoring below the thirty-seventh percentile were invited to participate in this study. Reliability of the TOWL-3 at the second grade level is .89 with moderate correlations with other measures of writing.

Consenting. Seven students met inclusion criteria as internalizing behavior patterns according to the SSBD and falling at or below the thirty-seventh percentile on the TOWL-3 writing measure. First, teachers of students meeting participation criteria on both the SSBD and the TOWL-3 were given an Institutional Review Board (IRB) approved consent form. Second, students of teachers who consented (100% agreed to participate) received and took home consent forms to parents. Finally, students whose parents agreed to participate in the study (86%; one parent did not return the consent form) were pulled from the classroom with their teachers present. Research assistants explained the study to the six students. All six students agreed to participate in the study and signed an IRB approved student assent form.

To reiterate, students with internalizing behavior patterns as indicated by exceeding normative criteria and progressing through Stage Two of the SSBD and who also performed at or below the thirty-seventh percentile according to the TOWL-3 were invited to participate. Six students meeting these criteria participated in this study.

Data Collection Procedures and Measures

Several methods and measures were used to collect the data for this study. First, the previously mentioned screening data were utilized from the PBS screening data

collected as regular school practices to identify students for participation in the study. Second, descriptive data were collected to determine student characteristics that may influence how students respond to the SRSD lessons. Descriptive data included the *Wechsler Intelligence Scale for Children-Fourth Edition* screener (WISC-IV; Wechsler et al., 2004), the *Social Skills Rating System – Teacher and Parent* versions (SSRS; Gresham & Elliott, 1990), and the *School Archival Record Search* (SARS; Walker, Block-Pedego, Todis, & Severson, 1991). All descriptive measures, excluding the WISC-IV screener, were administered pre and post-intervention. The WISC-IV screener was collected pre-intervention only, by a certified school psychologist.

Third, measures of social validity were collected from the teacher and student perspectives, pre and post-intervention. Fourth, measures of fidelity were collected during SRSD instruction by an outside observer to ensure all parts of the intervention were addressed. Finally, writing and behavioral outcomes were measured pre-intervention, post-intervention, and during maintenance to determine functional relations between these outcome variables and the manipulation of SRSD instruction. Direct observation methods were used to obtain estimates of behavioral outcomes while persuasive writing prompts were used to obtain estimates of writing outcomes.

Descriptive Measures

Several descriptive measures were used to establish student characteristics prior to the implementation of the SRSD intervention. First, students were assessed to determine estimates of cognitive ability. Second, social skills and problem behavior ratings, from both teacher and parent perspectives, were collected. Finally, information was obtained

through a search of each student's school records to determine attendance, number of schools attended, disciplinary contacts, and special education services.

Wechsler Intelligence Scale for Children-Fourth Edition. The WISC-IV screener (Wechsler et al., 2004) provides an estimate of cognitive ability for children ages 6 to 17 and consists of 13 subtests across a Verbal Scale and a Performance Scale. Only the subtests of vocabulary and block design were used for the purposes of this project. Vocabulary measures word knowledge and verbal fluency. Block design measures spatial and abstract visual problem solving. The WISC-IV short form (Sattler, 1991) was administered only once during this study at pre-intervention by a certified school psychologist. Reliability of the short form is 0.91.

Social Skills Rating System – Teacher and Parent versions. The SSRS-T (Gresham & Elliott, 1990) version consists of 30 social skills items rated by teachers in domains of cooperation, assertion, and self-control, and nine items on teacher perceptions of students' academic skills. The social skills scale ranges from 0 (*never*) to 2 (*very often*) with an additional importance scale for each item ranging from 0 (*not important*) to 2 (*very important*). The problem behavior domain has three subscales of externalizing problems, internalizing problems, and hyperactivity. Each item was rated on a 3-point scale of 0 (*never*) to 3 (*very often*). An importance rating is not included for this domain. The academic skills are rated on a 5 point scale with one being the lowest 10% and five being the highest 10% of the class. Broad reading and math, parent support, motivation, and general cognitive functioning are rated based on a class comparison. A unique aspect

of the SSRS is its utility for selecting target behaviors for intervention which then correspond to commercially produced interventions. Elliott and Gresham (1991) developed an intervention guide to accompany and supplement the SSRS. The SSRS-T has internal consistency ranges of 0.82 to 0.94.

The SSRS-P version also assesses the domains of cooperation, assertion, and self-control, but adds a domain of responsibility. In contrast with the SSRS teacher version, the parent version does not include a subscale rating of academic competence. The SSRS rating scales were given to teachers and parents prior to implementation of the intervention, then again at the conclusion of the intervention. Test-retest reliability for the parent rating scale was 0.87 for Social Skills and 0.65 for Problem behaviors.

School Archival Record Search. SARS (Walker, Block-Pedego, Todis, & Severson, 1991) quantifies information in school records on 11 variables: demographics, attendance, standardized achievement test information, retentions, referrals for academic and behavioral concerns, special education eligibility, placement, Chapter I (reading recovery) services, out-of-school referrals, negative narrative comments, and disciplinary contacts. Number of schools attended refers to the number of elementary schools the participant has attended. Negative narrative comments refer to the number of negative comments contained in the student's permanent record. These can include comments on report cards or notes sent home. Discipline contacts refer to the number of office referrals in the student's cumulative record. Attendance refers to the number of days absent and present in the past school year.

Individual variables from the SARS record are then compiled into domains of disruption, needs assistance, and low achievement. A student who scores positive on two or more variables in a domain is considered at-risk for that domain. Raw scores are transformed into z-scores to allow for analysis across domains and other rating scales. SARS is a useful screening tool for two reasons. First, people who do not know the child can gather and complete the information. Second, SARS information can be collected over the summer to ensure appropriate interventions are established on the first day of school. Other screeners require the teacher to know the child for at least 6 weeks prior to completing the ratings. This results in loss of intervention time. Interrater reliability for SARS ranges from 94% to 100%. SARS data were collected on participating students for the school year prior to implementation, then once again at the end of the academic school year.

Social Validity

Social validity was collected from two perspectives both pre and post intervention. First, teachers completed the Intervention Rating Profile-15 (IRP-15; Martens, Witt, Elliott, & Darveaux, 1985) prior to the implementation of the intervention, but after a description of the purpose and design of the study and intervention. Then students completed the Child Intervention Rating Profile (CIRP; Witt & Elliott, 1985) prior to the implementation of the intervention, but after a description of the intervention and purpose of the study. After the completion of the intervention students and teachers again completed the CIRP and IRP-15 rating scales. Teachers and students were given a graph of student progress after post-instructional probes, but before completing the social

validity rating scales. In addition, students were interviewed to determine specific parts of the intervention that they liked best, would change, etc.

IRP-15. Teachers completed the IRP-15 both pre and post intervention to assess changes in intervention acceptability. The IRP-15 consists of 15 items that assess treatment acceptability from the teacher's perspective (see Appendix L). A 6-point Likert rating scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*) was used to determine acceptability of the goals of the intervention, intervention procedures and outcomes. Internal consistency reliabilities range from .88 to .98.

CIRP. The CIRP consists of 7 items that assess treatment acceptability from the student's perspective. A 6-point Likert scale ranging from 1 (*I do not agree*) to 6 (*I agree*) is used to determine acceptability of intervention procedures and outcomes (see Appendix M). Internal consistency reliabilities for the CIRP range from .75 to .89. Participating students were given the CIRP orally pre and post-intervention.

Social validity interviews. In addition to the rating scales, SRSD instructors interviewed students post intervention to determine treatment acceptability (see Appendix K). Interview questions were (a) *If you were the teacher would you teach POW and the TREE strategy to your students? Why or Why not?* (b) *If you did teach POW and the TREE strategy to students, What would you do the same?* (c) *What would you do different?* (d) *What did you like or not like about POW?* (e) *What did you like or not like about the TREE strategy?* (f) *What did you like or not like about the rockets?* (g) *What*

did you like or not like about having self statements? (h) Where can you use POW and what can POW help you do? (i) Where can you use the TREE strategy and what can the TREE strategy help you do? (j) Where can you use your self-statements that you have chosen and what can your self-statements help you with? A final measure of social validity was obtained through student and teacher comments. Student and teacher comments were recorded throughout the study.

Treatment Fidelity

A random sample of approximately 34% of instructional lessons in each leg of the study across conditions was collected by an outside observer. A checklist containing instructions for completing each lesson was used to determine presence or absence of each instructional component (see Appendix B). The reliability was calculated by dividing the components observed by the components possible and multiplying the quotient by 100. Scores ranged from 66.67% (one instructional lesson for Bob) to 100%. Although Bob's instructor only taught 66.67% of the components for this lesson, his average treatment fidelity score was 82.22%.

Outcome Measures

Finally, both behavioral and writing outcomes were evaluated pre-intervention, post-intervention, and maintenance. Writing was measured by providing a persuasive prompt to students and asking them to write about it. Written essays were evaluated by evidence of planning, number of essential essay elements included, number of words written, and the quality of essays. Behavioral observations were conducted using the

direct observation of students' academic engaged time and disruptive behavior in the general education classroom setting during scheduled writing blocks.

Persuasive Writing Prompts

Persuasive writing prompts (see Appendix N) were presented in the form of a question soliciting an opinion on home or school issues (e.g., *Should children go to school in the summer?*). The persuasive writing prompts have been validated in previous investigations (Harris et al., in press; Saddler, Moran, Graham, & Harris, 2004). Prior to beginning this study, persuasive prompts were randomized. Writing prompts were given to students individually; students were provided as much time as they needed to complete the essay. Students were not given more than one prompt in a day to avoid writing fatigue. After the student completed the essay, he or she was asked to read it back to the assessor to ascertain illegible words.

Essays produced by students were typed and sent to a person, not directly involved with participants of the study, for scoring. Essays were scored on (a) time spent planning and evidence of organizing notes, (b) total number of structural elements (premise, reasons, elaborations, conclusion), (c) composition quality (ideation, organization, grammar, sentence structure, and aptness of word choice), and (d) composition length (number of words written).

Planning. The inclusion of planning in the writing process was assessed at baseline, post-intervention, and maintenance in two ways. First, the amount of time that elapsed between the end of the prompt instructions and the beginning of writing was

recorded. If students were writing notes rather than the essay, this was included in the “planning time.” Next any planning notes that were written by students prior to writing the essay were evaluated for inclusion of specific writing strategies (ie. mnemonic, writing in note form rather than complete sentences).

Essay elements. Essays were scored to determine the number of essential elements contained in each essay. As no limit was placed on the number of reasons or elaborations students could write (with only a minimum number of elements, three, taught during instruction), there was no ceiling on the rating scale. Essential elements included (a) a topic sentence, (b) reasons, (c) elaborations, and (d) an ending. Each essential element contained in student essays was given a score of 1. No student in this study included more than 10 essential elements in any essay. Essay elements were scored by a principle investigator of this study, while reliability of scoring was completed by a person blind to the purpose and conditions of the study. For reliability of essay elements, the scorer was trained using essays not related to the current study by (a) discussing the essential elements, (b) practice scoring 15 unrelated persuasive essays, (c) and resolving conflicts between the primary and secondary scorer. The Pearson reliability correlation on the 15 training essays was .98. To establish reliability for number of essay elements included in probes for this study, a second person blind to the purpose and condition of the study rescored a random sample of 25% of the essays. Reliability for scoring of essential essay elements was 0.91.

Quality. The quality of essays was evaluated using a holistic 7-point rating scale developed by Graham and Harris (1989). A score of 1 represents the lowest possible rating for essay quality while a score of 7 represents the highest possible rating for essay quality. The primary scorer, blind to the purpose and conditions of the study, scored each baseline, post-intervention, and maintenance probe. To establish reliability of essay quality scores, scorers were trained using 20 persuasive essays unrelated to the current study. First, the quality scale was explained and discussed. Second, scorers practiced scoring essays while discussing differences in ratings. Finally, scorers discussed differences in ratings and resolved conflicts if the score differed by more than one point. The Pearson correlation for scoring of the 20 practice essays was 0.85. To establish the reliability of quality scoring for this study, the second scorer rescored 100% of the essays. The reliability correlation for quality scores on essays collected during this study was 0.83.

Essay length. Essays were also scored for the number of words contained in each essay. Each essay was (a) corrected for spelling, capitalization, and punctuation, (b) typed with identifying information removed, and (c) evaluated for the number of words contained using Microsoft Word “word count.”

Behavioral Observations

Behavioral measures were academic engaged time and disruptive behavior. As with the writing prompts, behavioral measures were collected at pre, post, and maintenance time points. Students’ classroom behaviors were assessed during writing

instruction using the Multiple Option Observation System for Experimental Studies (MOOSES; Tapp, Wehby, & Ellis, 1995) on handheld Dell Axim computers. MOOSES is a computer-based observation system designed to collect frequency and duration of behavioral events simultaneously in real time. Specific behavioral codes developed for this project were used by research assistants to code student behavior. Codes were defined as academic engaged time, non-engaged time, and inappropriate non-engaged behavior. Research assistants received 5 hrs of training on MOOSES including behavioral definitions, technical operations of the handheld computer and MOOSES program, and practice. Training procedures are described later.

Academic Engagement. Academic engaged behavior was defined as appropriate student engagement in assigned/approved activities. Signs include attending to the material and task, making appropriate motor responses, asking for assistance in an acceptable manner, and waiting appropriately for the teacher to begin or continue with instruction. Examples include (a) writing on assigned workbook page, (b) reading aloud with the class when directed to do so, and (c) putting his or her head down for 4 s, then continuing to work. Non examples include (a) staring at the ground for at least 5 s and (b) talking with peers while the teacher helps another student.

Non-engaged behavior was defined as not participating in an approved/assigned activity. This can include looking around the room, leaving seat and wandering around the room, or disrupting others. Specific examples include staring away from the teacher, student talking, or instructional materials for more than 5 s, or remaining seated for more than 5 s after a teacher directive to stand up and stretch. Non examples include looking at

the book while the teacher is reading out loud and completing an assignment in a workbook. The duration of engaged and non-engaged behavior was recorded.

Disruptive behavior. Inappropriate non-engaged behavior was defined as statements, vocalizations, or physical contact with the intent to provoke, annoy, pester, complain, tattle, or make fun of another. Inappropriate non-engaged behavior was recorded as a frequency count. Examples included protests such as “No, I won’t do it” or “Hey, that’s not fair” and physical aggression such as hitting, pushing, biting, or kicking. Non examples included accidentally bumping into someone else or putting his or her arms around someone and hugging him or her.

Training. After research assistants reached a mastery level of 100% on behavioral definitions and codes as indicated by a written test, they practiced observations in non-participating classrooms until at least 90% inter-observer agreement (IOA) was reached on three consecutive observations. All observations of participating students took place during scheduled writing instruction/activities in the general education setting for 15 min time blocks. It took researchers between three and ten observations to become reliable.

IOA for current study. During approximately 38% of observations of participating students in each phase and across legs of the study, a second observer collected IOA data. For duration measures, second by second reliability was evaluated by calculating the number of seconds of agreement divided by the total of seconds observed, multiplied by 100. Interobserver agreements for academic engagement were high with an overall mean

of 93.71% ($SD = 6.41$) and a range of 88.88% during the baseline phase to 98.11% during the maintenance phase. For frequency counts, agreement was calculated using a 10s window described by MacLean, Tapp, and Johnson (1985). Agreements were divided by total occurrence and multiplied by 100. Interobserver agreements for disruptive behavior were very high with an overall mean of 100% ($SD = 0.01\%$) and a range of 99.99% during the baseline phase to 100% during the post-intervention and maintenance phases.

Intervention

During the intervention phase of each leg, students received SRSD instruction for persuasive writing (see Appendix A). The general planning procedures included three steps taught through the mnemonic POW. The first step is *Pick my Idea*. At this step, students were taught to generate ideas and decide what to write about by telling what they believe about the given prompt. The second step is *Organize my Notes*. During this step students were taught a mnemonic for organizing their notes (TREE). TREE contains *Topic sentence*, *Reasons* (three or more), *Ending* (wrap it up right), and *Examine* (look back at the essay to make sure you used all the parts of TREE). The third step in POW is *Write and Say More*. During this stage, students used the notes generated through the TREE mnemonic to write an essay using all parts and transition words. See Appendix D for the mnemonic chart.

The writing strategies were taught within the SRSD model. The six instructional stages of SRSD (described next) were taught to students. Students progressed through these stages by mastery to criterion rather than for a specific period of time. In addition to SRSD instruction for persuasive writing, each lesson began with a review of the school-

wide PBS expectations. Students were then told they could earn a PBS ticket (see Appendix F for a sample PBS ticket) for meeting the school-wide expectation during SRSD instruction.

The first stage in SRSD instruction is *Develop Background Knowledge*. During this stage, students were taught the steps to POW and why each part is important. Second, the knowledge needed to use the genre specific strategy was discussed by examining persuasive writing samples to find the parts and discuss why the author chose them. In addition, transition words were discussed and found in essays. Students were given a transition word list (see Appendix I) to help in finding transition words in essays. They were also asked to think of new transition words and could add these to the list. Students were taught that essays should tell what they believe, be fun to write, be fun for others to read, have all the parts of TREE, and make sense. Students continued to find the parts of TREE in essays until they could easily find the parts and transition words on their own.

The second stage in SRSD strategy for persuasive essay writing is *Discuss It*. During this stage, students reviewed the parts of POW and TREE and discussed why each is important. Goal setting was introduced at this stage. Goals taught were (a) to include all essay parts, (b) use good transition words, and (c) use the strategy in other settings.

The third stage is *Model It*. In this stage, instructors modeled how to write an essay by talking out loud using self-statements such as “I have to remember to use all my parts.” Instructors began by *Picking* an idea, then proceeded to *Organize* my notes. Instructors modeled organizing notes by using a TREE graphic organizer (see Appendix E). After the notes were written, instructors modeled *Write* and say more by referring

back to the notes sheet to write an essay that includes all the parts, is fun to write, is fun for others to read, and makes sense. Throughout the modeling process, the instructor used self-talk out loud such as “Does this make sense?” and “What comes next?” Once the essay was finished the instructor modeled self-statements such as “I did a great job” and graphed the essay parts. Self-statements were then recorded on a self-statement list (see Appendix J) while the student added self-statements that he or she could use to help in planning and writing papers.

The fourth stage in the SRSD model is *Memorize It*. In this stage, students memorized the mnemonic and what it means utilizing a Rapid Fire game as needed. Each part of the mnemonic POW and TREE was placed on white card stock and cut into 3X5 cards (see Appendix G). In Rapid Fire, students played memory games with cards containing each part of the POW and TREE mnemonics. This game was played and the parts tested at the beginning of each lesson until students were able to tell the parts and what they meant without any support.

The fifth stage of the SRSD model for persuasive writing is *Support It*. In this stage, the instructors provided support while the student used POW and TREE to generate an essay from a prompt. Initially the instructors provided as much support as needed, and then slowly faded supports until the students were able to generate essays by themselves. Supports included re-modeling and writing collaboratively as needed. An essay from the student’s baseline was then evaluated for containing the parts of TREE. Students graphed the parts found in their essays on self-monitoring rocket graphs (see Appendix C). Parts that were and were not included in the paper were discussed, and students had the opportunity to add to their essays to ensure all parts were included. In

previous work with typically developing students or students with learning disabilities, evaluating a baseline story was introduced in the early stage *Discuss It*. However, in a pilot study conducted by Adkins (2005), this was moved to a later stage since pilot work indicated that students with EBD find self-evaluations a negative experience. Students with EBD were more accepting of self-evaluation at the later stage *Support It*.

Finally, students participated in the *Independent Performance* stage of the SRSD strategy model. During this stage students used the POW, TREE, and self-regulation procedures to write essays independently. Independent practice was repeated until the students could successfully write essays independently.

Generalization and maintenance procedures were embedded throughout the lessons. These include (a) identifying opportunities to use the strategy in other classes or settings, (b) analyzing how these processes may need to be modified for other types of writing, (c) setting goals for using the strategy in other settings, and (d) evaluating successes and difficulties in applying these strategies in other settings. Generalization and maintenance goals were recorded on a *I transferred my strategy* sheet (see Appendix H).

Instructor Training

Research assistants were trained in the SRSD strategies for persuasive writing over a one month period for a total of 13 hrs of training. Several steps were involved in training research assistants to become instructors for SRSD for writing. While instructors were trained in a similar way to SRSD instruction used for students, it is not identical.

First, Developing Background Knowledge and Discuss It were combined to build the concepts and vocabulary that the instructors would need to teach SRSD. These two

stages are often combined in students' lessons as well. Researchers were given articles describing the stages of SRSD to read and were required to watch a video describing SRSD instruction. After the articles were read and the video watched, the trainer and instructors discussed SRSD. Following the discussion, instructors were given all instructional materials. The progression of the lesson plans and support materials such as the graphs were discussed. Instructors were then told to read the lesson plans prior to the next training day. In addition to describing the first two stages of SRSD, the instructors were told the purpose and design of the study; their roles in the study were described. The schools and children with whom they would be working were described next. For example, each school's PBS plan was discussed as well as examples of behaviors that may be observed with children who have behavioral issues. Instructors then watched additional videos of SRSD instruction being conducted (one video portrayed a student who was off-task often). In another video, designed to demonstrate cognitive modeling, a teacher demonstrated how to model the writing strategy for stories using a picture prompt of a turtle sitting on a log. The trainer and instructors then discussed, questioned, and provided answers about SRSD. Sample essays written, both pre and post SRSD intervention, by students in previous studies were then handed out to instructors. Samples were provided so that instructors would have reasonable expectations and see the differences they can make with these students. The goals for this stage of the training were to provide data to show that SRSD is effective, elicit excitement about teaching SRSD, and promote eagerness to work with student participants.

Second, the stage Model It was taught. Instructors watched two experienced people model how to teach SRSD for writing. Model It and Support It were combined

since adult instructors generally do not need the extended support that students often require. As SRSD instruction for writing was being modeled (with one adult acting as the instructor and the other acting as a child similar to the ones included in this study), specifics were discussed as needed. Illustrations from previous work of adaptations made to address individual student needs were shared. Emphasis was placed on individualizing SRSD instruction as long as all of the components and goals were included. Instructors were then placed in pairs. They took turns modeling and practicing with each other (taking turns being the instructor and student). This process was continued until instructors were fluent with each lesson. Fluency was determined from observations of instructors by the trainer and one other trained instructor. As instructors were practicing, the trainer watched, took notes, answered any questions, reviewed, and re-taught if necessary. Any issues that came up were shared with the whole group after each pair had finished practicing. Pairs used detailed lesson plans and all of the material that they would be using with students in this study.

Third, the Model It and Support It stages were continued until instructors had seen, discussed, and practiced to reasonable fluency, each SRSD lesson they would be teaching to students in this study. Each lesson takes only 20 to 30 min and instructors only pretended to write rather than taking the time to write, so this part of the instruction was not time consuming. For each of the seven lessons, the trainer (a) observed each instructor pair, (b) discussed issues that came up during the observations, (c) made notes, and (d) shared issues with the entire group. Additional questions were answered at this point and previous adaptations and experiences were shared. The lesson that took the greatest amount of time and support was the lesson on cognitive modeling. Instructors

were asked to prepare their first modeling of the writing process, according to the guidelines specified by SRSD instruction, in advance. The remaining lessons did not take as long as they are not as difficult and instructors were more familiar with the lessons. At this point, the trainer discussed the similarities in how the instructors were being taught and how the instructors would be teaching their students. Time for additional practice was provided as needed.

Finally, Independent Performance was introduced. In this stage, instructors prepared their own lessons for their assigned child. These lessons were not the detailed lessons used during the Model It and Support It stage, but outlines or shorter versions of the lesson plans prepared specifically by each instructor. This step was important as it assisted in the memorization of the stages and components of each lesson and provided ownership for the instructors. All lesson plans were then checked by the trainer to ensure that key components were included.

To ensure continuation of high treatment fidelity, several steps were taken after instruction began with participants in this study. First, during the first week of instruction, the trainer spoke with each instructor every day that she taught, to find out what went well or not so well. The trainer then discussed instructional or behavioral issues that were encountered or modifications that needed to be made for the next lesson. Problem behaviors were addressed through behavior management techniques and positive behavior supports. Second, all of the instructors and the trainer met once a week to discuss instructional or behavioral issues that arose. The group brainstormed ideas for coping with the issues and agreed upon adaptations that were to be used in future lessons. Finally, after the first week, instructors called the trainer any time assistance in resolving

an issue or problem was needed. Weekly meetings continued throughout the instructional phases of this study.

Experimental Design and Data Analysis

The functional relation between SRSD strategies instruction for persuasive writing and writing and behavioral outcomes was assessed through a multiple baseline design across students with multiple probes during baseline. After students were identified through the school wide PBS screening process, consented students were assigned to one of three legs. Although 2 students were placed in each leg, participants received the SRSD instruction on a one-on-one basis with a research assistant. The SRSD instruction was systematically and sequentially introduced to these 6 students. When students in leg 1 met the criterion of independently producing quality persuasive essays without prompts from the instructor, instruction began with students in leg 2. Outcome data was collected during baseline, post intervention, and maintenance. Data were not collected during the intervention phase given that the intervention was taught to mastery and that writing probes were part of the instructional process.

Baseline phase. During baseline, students continued to receive classroom writing practices which were described through teacher surveys and observations. Students were given three writing prompts to establish a stable baseline. Only one probe was given in a day to prevent writing fatigue. In addition to the writing prompts, students were observed in the classroom setting during writing activities to determine the percentage of time they remained engaged, non-engaged, or participated in inappropriate activities. Students were

observed for a 15 min period for each probe. Stability of behavioral data was not a requirement for beginning intervention as this measure was taken to determine the collateral effects on behavior. After stable responding occurred for the writing measures with the first leg students, instruction began. Students in leg 2 received subsequent baseline probes just prior to beginning instruction, while students in leg 3 received only 1 additional baseline probe prior to leg 2 students beginning the intervention. Students in leg 3 received multiple probes to determine stability of data just prior to implementation of the intervention in leg 3. Interobserver agreement was conducted on approximately 37% of the behavior observation probes in this phase of the study. Average inter-observer agreement was 88.88% ($SD = 11.00$) with a range of 71.89% to 100.00%.

In addition to the writing and behavior probes, additional descriptive measures were collected. To determine acceptability of the intervention prior to implementation, students were given the CIRP and a social validity interview, while teachers completed the IRP. In addition, teachers and parents completed the SSRS to determine baseline behavioral, social, and academic performances in the domains of social skills, problem behaviors, and academic competence.

Intervention phase. During the intervention phase, students received one-on-one SRSD instruction for persuasive writing. Students were instructed outside the classroom setting during times determined by their classroom teachers for 30 min blocks of instruction. Instruction took place 3 days a week. Students progressed through the instructional phase at different paces, with a range of seven to 13 days ($M = 10$, $SD = 2$) and 3 hrs 15 min to 6 hrs 30 min ($M = 4$ hrs, 50 min, $SD = 0.05$) of total instruction to

reach mastery. Procedural fidelity was collected on approximately 34% of instructional sessions by an outside observer. Instructors also communicated on a daily basis with the principal investigator to determine modifications that may be needed for this student population. Writing probes were not given during the instructional phase (a) since writing collaboratively and independently was a part of the instructional plan and (b) to prevent writing fatigue. Once students in the intervention phase achieved mastery to criterion, post-intervention probes were given.

Post-intervention probes. Once students met criterion referenced goals for the SRSD instruction, they were given persuasive writing probes and behavior observations were conducted during their classroom writing instruction. Interobserver agreement was collected on approximately 39% of the behavior observation probes during this phase. Average inter-observer agreement was 94.14% ($SD = 6.58$). In addition to the writing and behavior probes, students were given the post-social validity rating scale (CIRP) and the social validity interview. Teachers were given the IRP and the SSRS-T to determine perceptions of the SRSD intervention and behavioral changes that may have occurred post intervention. Parents were asked to complete the SSRS-P at this time as well.

Maintenance. Four to 6 weeks after the end of the intervention phase students received two persuasive writing probes and two 15 min behavior observations. Maintenance probes were collected at least one week apart. Inter-observer agreement was collected on approximately 37% of behavior observations at maintenance. Average inter-

observer agreement was 98.11% ($SD = 1.66$) with a range of 96.90% to 100.00%. The two students in leg 3 were not given maintenance probes due to time constraints.

Data analysis. Descriptive data are presented through standard scores and percentile ranks. The effects of SRSD strategy for persuasive writing were evaluated by addressing the core quality indicators as presented in Horner, Carr, Halle, McGee, Odom, and Wolery (2005). First, the individual participant was the unit of analysis with 2 students in each leg to address potential attrition. Second, operational descriptions of the participants, setting, and participant selection were provided. Third, multiple dependent variables were measured to assess writing and behavioral performances. The dependent variables were operationally defined, measured repeatedly, and assessed for consistency (IOA) to control for instrumentation threats. Fourth, the independent variable (SRSD instruction) was operationally defined, assessed for fidelity of implementation, and systematically manipulated by the experimenter. Fifth, baseline was described in detail with repeated measures of the dependent variables to establish prior performance. Sixth, the presentation of the intervention was staggered, starting at 3 different time points to demonstrate experimental control. This study contained six demonstrations of the experimental effect (2 in each leg of the study). The multiple baseline design also controlled for common threats to internal validity such as history and maturation.

Seventh, writing and behavior probes were graphed and analyzed via recommended analysis procedures. Visual inspection was used to interpret level, trend, and variability of performance in each phase of the study. Variability estimates were calculated during baseline. Furthermore, the immediacy of SRSD instruction, the

proportion of data points that overlap in adjacent phases, the magnitude of changes in each dependent variable, and the consistency of data patterns across participants was assessed. To further validate the experimental effect of the intervention, an observer blind to the purpose and phases of the study was asked to validate findings of graphs with phase lines removed. While these steps assist in determining the functional relation between the independent and dependent variable, additional steps were taken to ensure external validity.

First, external validity was enhanced by replication across 6 participants and the use of multiple dependent measures. Second, external validity was further enhanced by operational definitions of the participants, descriptions of baseline conditions, and context of the study. Finally, social validity was assessed from two perspectives (teacher and student) at two time points (pre and post).

CHAPTER IV

RESULTS

Overall, results indicated that SRSD instruction for persuasive writing was effective in increasing the writing performance of students with internalizing behavior patterns and poor or low average writing skills. Collateral effects on behavior varied. First, fidelity of treatment is discussed. Second, the amount of time spent planning is presented. Third, writing results are presented according to evidence of planning, number of essential essay elements included, number of words written, and quality of essays in each phase of the study. See Appendix O for samples of student essays at baseline and post-instructional time-points. Fourth, behavioral outcomes are presented as percentage of engagement and disruption across phases and students. Finally, the results of social validity ratings and interviews are presented.

Treatment Integrity

Treatment integrity was collected on 33.91% of instructional sessions across participants and study conditions. SRSD instruction for persuasive writing was implemented with a high degree of fidelity. The average fidelity across students was 97.08% ($SD = 3.94\%$, See Table 2). The lowest fidelity rating was observed with Bob's instructor as indicated by an average of 82.22% of the components (range of 66.67% to 100%) being taught across lessons. According to the outside fidelity observer, during instruction, Bob spoke very little and when he did speak, it was in a whisper. His

instructor spent much time “waiting” for responses from Bob. Consequently, components appear to have been left out to make up loss of time. The components that were excluded in two lessons were discussion and reminders to transfer and reminding the student of the next day’s quiz on the mnemonic.

Table 2. *Social Validity and Treatment Fidelity by Student and Phase*

		Social Validity		Treatment Fidelity
		IRP-15	CIRP	% (<i>SD</i>)
Kathy	Baseline	90	34	
	Intervention			94.44 (9.62)
	Post-Intervention			
Bob	Baseline	90	33	
	Intervention	77	34	82.22 (16.78)
	Post-Intervention			
Skylar	Baseline	58	39	
	Intervention	83	31	100.00 (0.00)
	Post-Intervention			
Michelle	Baseline	74	39	
	Intervention	71	32	100.00 (0.00)
	Post-Intervention			
Lisa	Baseline	74	34	
	Intervention	75	37	100.00 (0.00)
	Post-Intervention			
Ann	Baseline	*	41	
	Intervention	76	32	100.00 (0.00)
	Post-Intervention			
	Intervention	*	37	

Note. IRP-15 refers to the *Intervention Rating Profile* (Martens et al., 1985). CIRP refers to the *Children’s Intervention Rating Profile* (Witt & Elliott, 1983); * refers to teacher did not return the form; *SD* = Standard Deviation.

Planning

During baseline, only one student planned an essay in advance and only on one of her baseline probes. On the first baseline probe, Ann spent 3 min planning. Her planning notes consisted of writing an essay, then rewriting the same essay without making changes. Time spent before beginning to write varied across student and phase of the study. Time spent before beginning to write during baseline ranged from 0 s to 3 min. Other than the one probe on which Ann took notes, the time spent planning consisted of sitting and waiting before beginning to write. It may be that students were organizing ideas covertly although not much time was spent sitting quietly before beginning to write as indicated by the longest amount of time being only 3 min.

After instruction, only 3 students took planning notes. Kathy took planning notes, using the mnemonic TREE, on all post probes. She spent an average of 13 min planning. Skylar took planning notes on her first post probe only. Although her planning notes during the *Support It* stage of SRSD instruction included the mnemonic TREE and note form, her one attempt at planning notes after instruction consisted of writing the essay, then rewriting it with no changes. While she spent 7 min planning on the first post probe, she spent 0 s planning on each of the next two post intervention probes. Despite the lack of planning notes, Skylar's post-instructional essays included all essential elements (7, 5, and 6, respectively). Lisa took planning notes on all post probes and used the mnemonic to help organize her notes. She spent an average of 8 min, 20 sec planning.

Writing Outcomes

Baseline. During baseline, student essays were short and incomplete, containing only a few elements (See Table 3). Students included an average of 1.86 ($SD = 0.52$) essential essay elements with a mean range of 0.86 (Michelle) to 4.00 (Lisa). Slopes for number of elements included were relatively flat and stable with ranges from 0.00 for Kathy and Bob to 0.21 for Michelle. Skylar had a downward slope of -0.26 ($S_{y,x} = 0.65$).

For the majority of the students, quality scores were also low, with means ranging from 0.57 ($SD = 0.79$) for Michelle to 2.57 ($SD = 0.53$) for Ann on a scale of 0 to 7. In contrast to the low quality scores on baseline essays for five of the students, one student had quality scores well above the others during baseline. Lisa had an average quality score of 5.00 ($SD = 1.20$); however, the range of scores varied from a low of 3 to a high of 7 (see Table 3). Slopes for quality were relatively flat as indicated by slopes of -1.63 to 0.50; however, variability was greater for quality scores than for elements with standard errors ranging from 0.41 for Ann to 2.79 for Skylar.

Students wrote an average of 21.36 ($SD = 8.15$) words per essay with a mean range of 9.00 (Bob) to 63.75 (Lisa). Slopes were low, flat, and stable for five students with ranges of -3.00 ($S_{y,x} = -2.00$) for Kathy to 1.00 ($S_{y,x} = -2.00$) for Bob. In contrast with the other participants, Lisa had an increasing slope of 8.50 with high variability ($S_{y,x} = 42.87$).

Post-Intervention. All students responded to the SRSD instruction for persuasive writing as evidenced by changes in the number of elements contained in probes and to a

lesser extent essay quality and length (see Figure 1). PND's were 100% from baseline to post intervention and from baseline to maintenance for all six students on number of essay elements (see Figure 1), the primary variable of interest. Post-intervention scores for essay elements were high with mean scores ranging from 4.00 ($SD=1.00$) for Bob to 8.67 for both Lisa ($SD=1.53$) and Ann ($SD=0.58$). All students improved from baseline levels by producing essays with 2.17 fold (Lisa) to 7.56 fold (Michelle) more elements after SRSD instruction. Variability for essay elements was low for most of the students at post intervention (within a 2 point range). However, two students had high scores of 9 (Michelle) and 10 (Lisa) that increased variability on their post-intervention probes ($SD = 2.12$ and $SD = 2.04$, respectively). Michelle's post scores on essay elements ranged from 5 to 9, up from a range of 0 to 2 during baseline, while Lisa's post-intervention probes ranged from 7 to 10, up from 2 to 6 on baseline essays.

Mean quality scores of essays improved for five students from baseline to post intervention with means increasing to a range of 3.00 ($SD = 1.73$) for Michelle [from a baseline mean of 0.57 ($SD = 0.79$)] to 5.67 ($SD = 0.58$) for both Kathy [from baseline levels of 2.33 ($SD = 1.15$)] and Skylar [from baseline levels of 1.67 ($SD = 0.82$)]. Lisa improved her mean quality score by only 0.33; however, this increase is not substantial. Strong effects for SRSD for persuasive writing on quality were found for two students (Kathy and Skylar) with 100% PND's from baseline to post-intervention (see Figure 2). Bob improved the quality of his essays by more than 2 fold with post-intervention probes increasing to a mean of 4.33 ($SD = 1.15$) from a baseline mean of 2.00 ($SD = 1.00$), although he had a quality score of 3 on one baseline probe that overlapped with a quality score of 3 on a post-instructional probe (PND = 67%). While two students improved the

quality of their essays as indicated by mean increases of 1.57 fold (Ann) and 5.26 fold (Michelle), PND's were 33% and 50% respectively. Michelle had two quality scores of 2 on her post-intervention probes that overlapped with one quality score of 2 in baseline (although all other baseline quality scores were 0 and 1 ($n=6$)). Ann obtained two quality scores of 3 during post-intervention that overlapped with scores of 3 on baseline probes. Lisa obtained the highest quality score possible (7) on one of her baseline essays and consequently received a PND of 0%. While Lisa and Ann only improved slightly more than 1 fold on quality scores from baseline to post intervention, mean baseline quality scores (5.00, $SD = 1.20$ and 2.57, $SD= 0.53$) were higher than the other students at baseline. Post intervention quality scores for Lisa and Ann were within the range of scores obtained by the other students (5.33, $SD =0.58$ and 4.00, $SD = 1.73$ respectively).

There were also substantial increases in the average length of essays produced on post-intervention probes as compared to baseline essays with mean score increases of 1.25 fold for Lisa to a high of 6.5 fold for Michelle (see Figure 3). Post-intervention essays increased to an average of 57.53 ($SD=12.09$) words per essay with a mean range of 25.67 ($SD=8.74$) for Bob to 80.00 ($SD=10.39$) for Lisa. Five students substantially increased the number of words written on post-intervention essay probes as indicated by 100% PND from baseline to post-intervention. Kathy and Skylar both increased the length of their essays by 4 fold, while Bob and Ann increased their length of essays from baseline to post by 2.5 fold and 3.3 fold respectively. Although Lisa increased her average length of essays by only 16.25 words, her baseline essays were lengthy [averaging 63.75 ($SD = 28.11$) words]. Trends remained flat for Kathy, Bob, and Ann with a slope of -2.00 words for each. Skylar had an increasing slope of 6.00 ($S_{y,x} = 10.61$),

while Michelle had an increasing trend of 7.20 ($S_{y,x} = 30.71$). However, Michelle had a high score of 109 words on one of her post-instructional essays that created a positive slope. Lisa had a decreasing trend of -9.00 ($S_{y,x} = 7.35$) during post-instructional probes. As mentioned earlier, Lisa produced essays of high quality and length during baseline intervention probes.

Maintenance. Maintenance was only collected on the students in the first and second legs of the study due to time constraints. All students who received maintenance probes maintained essay element scores above baseline levels as indicated by PND's of 100% from baseline to maintenance. Bob, Michelle, and Skylar all obtained scores within the range of their post-intervention essay scores as indicated by PND's of 0% from post-intervention to maintenance. While Kathy's score remained above her baseline essay scores of 2, 2, and 2, her maintenance scores of 6 and 6 were not as high as her post scores of 8, 7, and 8.

Quality scores maintained high levels for the four students who received maintenance probes with two students improving slightly from post-intervention levels. Kathy's mean quality scores increased to 6.50 ($SD = 0.71$) from a mean post-intervention score of 5.67 ($SD = 0.58$) and a baseline mean score of 2.33 ($SD = 1.15$). Michelle's mean quality score (3.50, $SD = 0.71$) also improved from post-intervention levels (3.00, $SD = 1.73$) and baseline levels (0.57, $SD = 0.79$). Two students' quality scores decreased slightly from post-intervention levels, but remained well above mean baseline quality scores. Bob's average maintenance quality score was 3.50 ($SD = 0.71$) which decreased slightly from a post-intervention mean quality score of 4.33 ($SD = 1.15$); however, this

remained above his mean baseline quality score of 2.00 ($SD = 1.00$). Skylar's mean maintenance quality score (5.00, $SD = 1.41$) also decreased slightly from a mean post-intervention score of 5.67 ($SD = 0.58$); however, this score remained well above her baseline quality mean of 1.67 ($SD = 0.82$).

Of the 4 students who received maintenance probes, the number of words written remained relatively stable ($M=56.25$; $SD=43.85$) as compared to the length of essays in post-intervention. Two students dropped slightly from post intervention essay lengths with mean scores of 48.00 ($SD=8.49$) for Kathy and 42.50 ($SD=2.12$) for Skylar. These scores, however, were well above baseline levels (12.33 and 12.50, respectively). Two students increased the number of words written in post-instructional essays to maintenance essay lengths of 30.50 (Bob) and 104.00 (Michelle). No student dropped to baseline levels for number of words written.

Table 3. *Writing and Behavioral Changes Across Students and by Phase*

		Writing						Behavior	
		Elements		Quality		Total Words		Academic Engagement	
		Slope		Slope		Slope		Slope	
		<i>M (SD)</i>	<i>(S_{y·x})</i>	<i>M (SD)</i>	<i>(S_{y·x})</i>	<i>M (SD)</i>	<i>(S_{y·x})</i>	<i>M (SD)</i>	<i>(S_{y·x})</i>
Kathy	Baseline (3)	2.00 (0.00)	0.00 (0.00)	2.33 (1.15)	0.00 (1.63)	12.33 (3.21)	-3.00 (1.63)	91.20 (12.49)	-11.55 (6.74)
	Post-Intervention (3)	7.67 (0.58)	0.00 (0.82)	5.67 (0.58)	-.50 (0.41)	54.67 (4.57)	-2.00 (5.72)	88.40 (18.27)	-15.90 (12.74)
	Maintenance (2)	6.00 (0.00)		6.50 (0.71)		48.00 (8.49)		92.95 (1.34)	
	PND _a	100%		100%		100%		0%	
Bob	Baseline (3)	1.00 (0.00)	0.00 (0.00)	2.00 (1.00)	0.50 (1.22)	9.00 (2.00)	1.00 (2.45)	56.50 (26.68)	15.10 (31.11)
	Post-Intervention (3)	4.00 (1.00)	0.50 (1.22)	4.33 (1.15)	0.00 (1.63)	25.67 (8.74)	-2.00 (8.16)	69.60 (12.49)	1.65 (17.51)
	Maintenance (2)	4.00 (0.00)		3.50 (0.71)		30.50 (0.71)		51.00 (0.28)	
	PND _a	100%		67%		100%		33%	
Skylar	Baseline(6)	1.17 (0.75)	-0.26 (0.65)	1.67 (0.82)	-1.63 (2.79)	12.50 (3.94)	-0.17 (0.84)	64.40 (23.78)	-2.73 (25.96)
	Post-Intervention (3)	6.00 (1.00)	-0.50 (1.22)	5.67 (0.58)	-0.50 (1.19)	49.67 (9.61)	6.00 (10.61)	84.97 (6.33)	5.10 (5.31)
	Maintenance (2)	5.50 (0.71)		5.00 (1.41)		42.50 (2.12)		77.85 (31.32)	
	PND _a	100%		100%		100%		0%	

Table 3. *Writing and Behavioral Changes Across Students and by Phase Continued*

Michelle	Baseline (7)	0.86 (0.69)	0.21 (0.56)	0.57 (0.79)	0.07 (0.85)	11.43 (4.69)	0.25 (5.10)	58.10 (16.97)	-0.15 (18.97)
	Post-Intervention (4)	6.50 (1.73)	0.00 (2.12)	3.00 (1.73)	0.00 (1.73)	74.50 (26.74)	7.20 (30.71)	81.50 (0.61)	-0.05 (0.86)
	Maintenance (2)	8.00 (1.41)		3.50 (0.71)		104.00 (32.53)		55.25 (30.62)	
	PND _a	100%		50%		100%		100%	
Lisa	Baseline (8)	4.00 (1.31)	0.07 (0.41)	5.00 (1.20)	0.19 (0.41)	63.75 (28.11)	8.50 (42.87)	83.03 (13.05)	4.19 (5.39)
	Post-Intervention (3)	8.67 (1.53)	-0.50 (2.04)	5.33 (0.58)	-0.50 (0.41)	80.00 (10.39)	-9.00 (7.35)	79.97 (17.87)	-12.85 (17.60)
	PND _a	100%		0%		0%		33%	
Ann	Baseline (7)	2.14 (0.38)	0.04 (0.41)	2.57 (0.53)	-0.18 (0.41)	19.14 (6.96)	-0.93 (7.30)	79.20 (21.81)	4.73 (21.11)
	Post-Intervention (3)	8.67 (0.58)	-0.50 (0.41)	4.00 (1.73)	-1.50 (1.22)	63.67 (15.14)	-2.00 (21.23)	82.07 (10.75)	-10.40 (3.84)
	PND _a	100%		33%		100%		0%	

Note. PND = percentage of non-overlapping data points; M = mean; SD = standard deviation; numbers in parentheses are the number of probes given; $S_{y \cdot x}$ = standard error; a= PND are comparing baseline to post-intervention

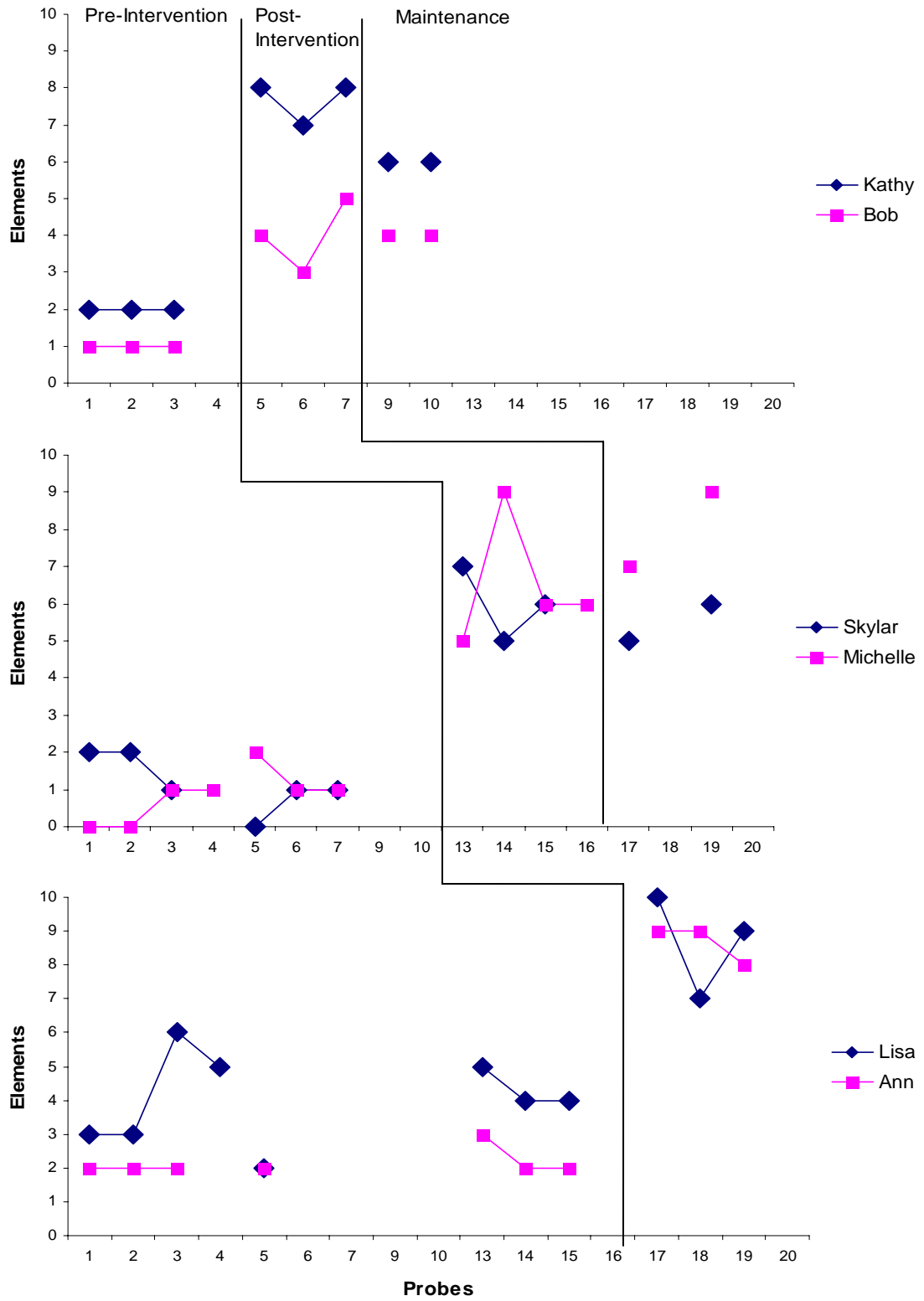


Figure 1. *Essay Elements by Student and Phase*

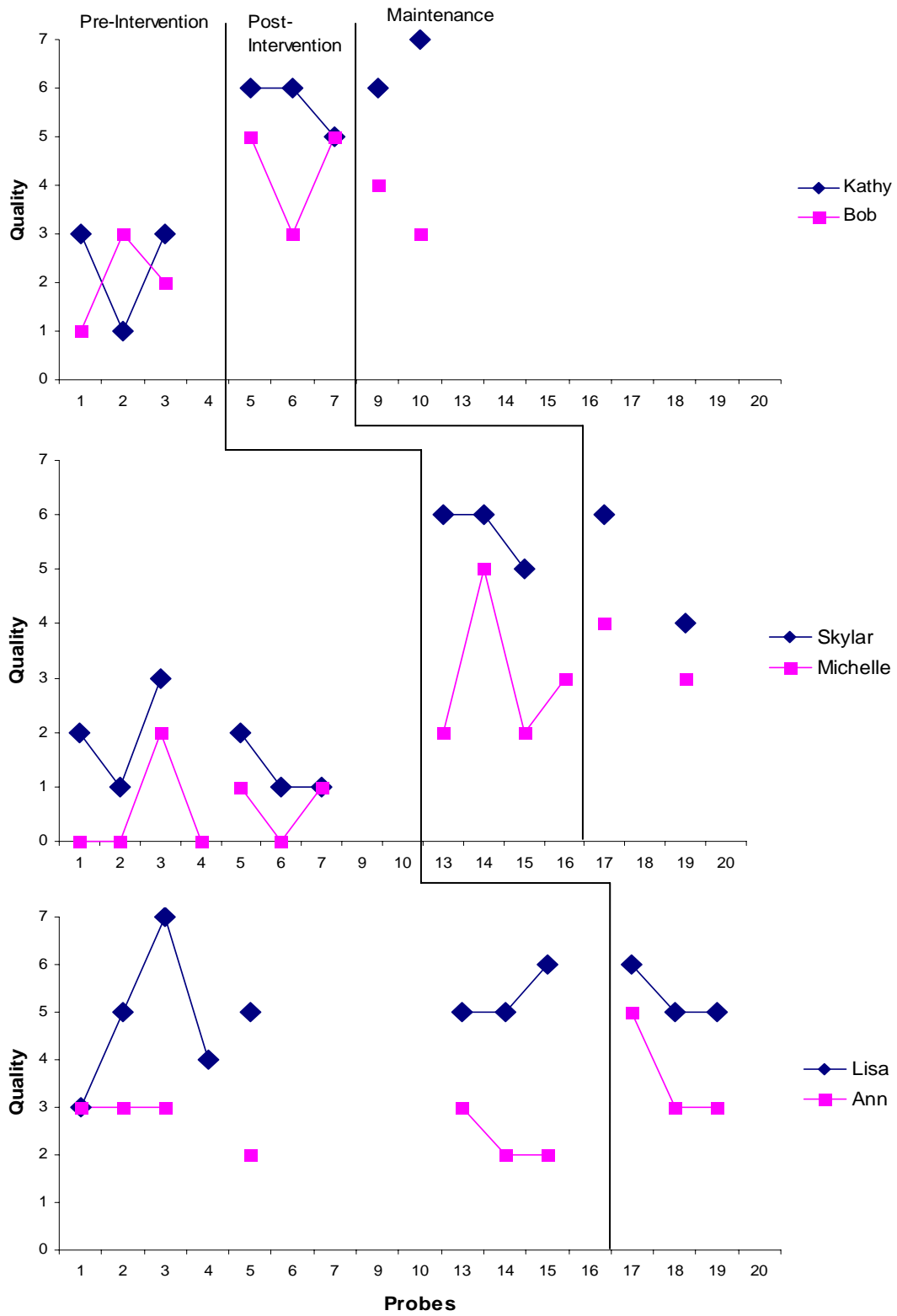


Figure 2. *Quality of Essays Across Students and Phases*

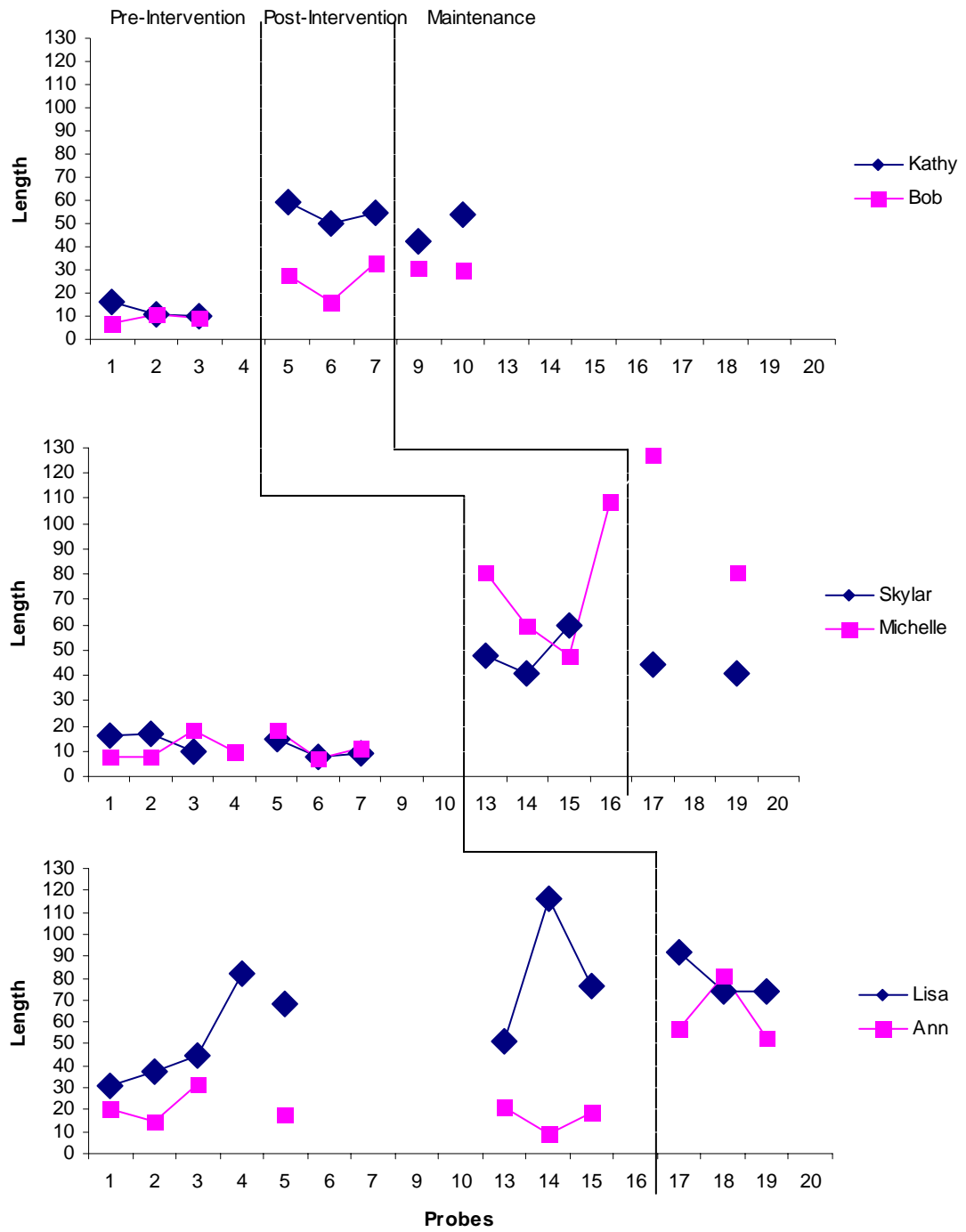


Figure 3. Length of Essays Across Students and Phases

Behavioral Outcomes

In addition to writing outcomes, academic engaged time and total disruptive behavior were assessed during scheduled classroom writing blocks (see Figure 4). A common characteristic of students with, or at risk for, EBD is the variability in behavioral performances (Little, in preparation). This was also evident in the direct observation data collected for this study; although in this study, the variability may be a reflection of attempts at far rather than near transfer. Only two students exhibited disruptive behaviors during the study with extremely low levels in baseline ($M=0.33$, $SD=0.58$ for Kathy and $M=0.15$, $SD=0.25$ for Skylar). Disruptive behaviors were not observed for Kathy at post-instructional or maintenance probes. Skylar had a mean of 0.13 ($SD=0.23$) disruptive behaviors at post-instructional observations which dropped to 0.00 at maintenance. As very little disruptive behavior was observed, it is not discussed further.

Baseline. Baseline levels of academic engaged time varied greatly from a low of 28.7% (Bob) to a high of 100% (Kathy). Each student was observed for three (leg one students) to seven (leg three students) 15 min observation sessions during baseline. While mean levels of engagement were relatively high for all students ($M=72.07\%$; $SD=19.13$), variability was also high with standard deviations ranging from 12.49 (Kathy) to 26.68 (Bob). Kathy, Skylar, and Michelle had decreasing trends of academic engagement during baseline observations (-11.55, -2.73, and -0.15, respectively). Bob, Lisa, and Ann had an upward trend in academic engagement (15.10, 4.19, and 4.73, respectively).

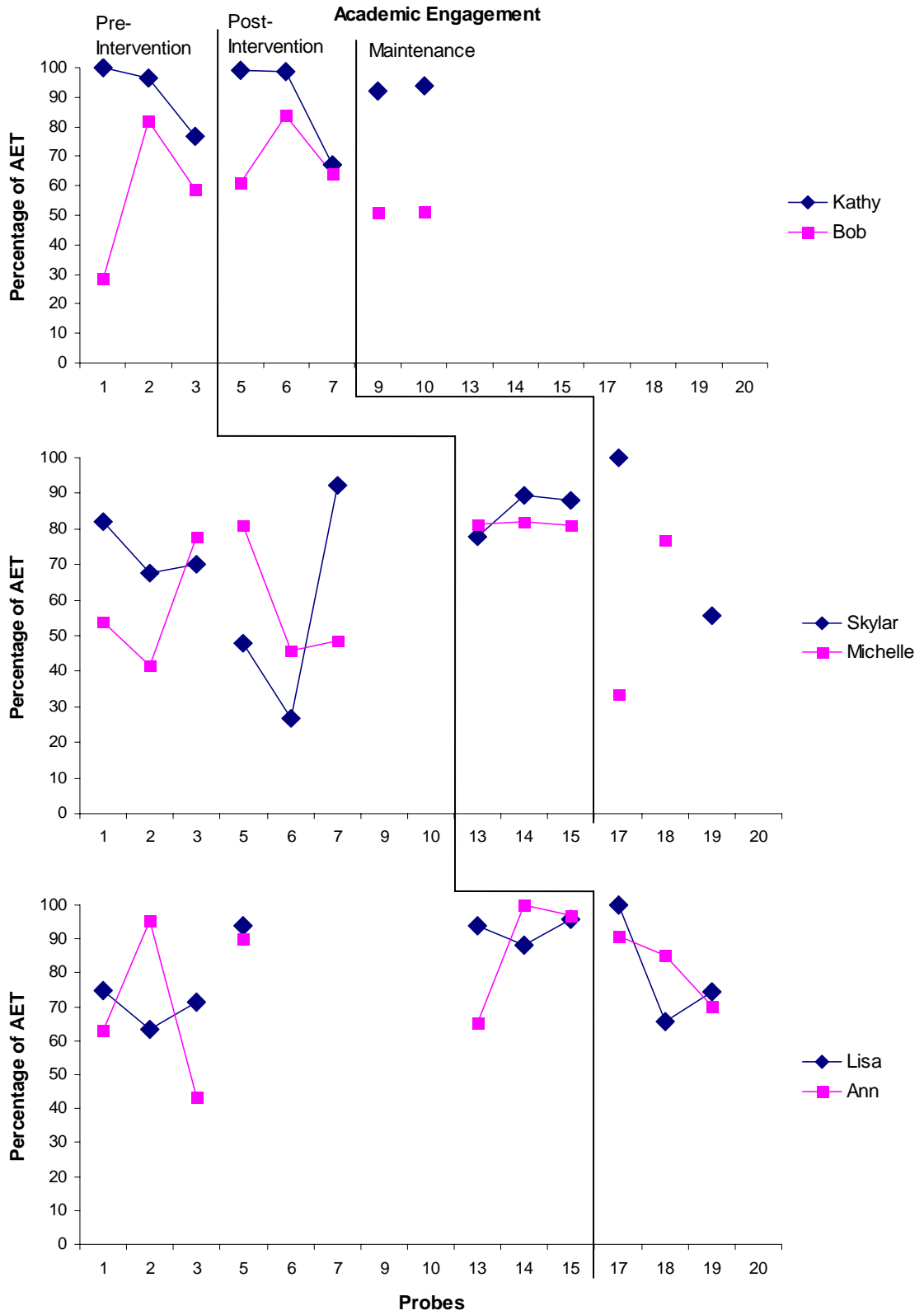


Figure 4. Academic Engaged Time Across Students and Phases

Post-Intervention. Mean levels of engagement ($M = 81.05\%$; $SD=11.05$) increased slightly from baseline levels. Bob, Skylar, Michelle, and Ann demonstrated increased levels of engagement from baseline levels with post-intervention mean levels of 69.60% (up from 56.50%), 84.97% (up from 64.40%), 81.50% (up from 58.10%), and 82.07% (up from 79.20%) respectively. Kathy decreased from a mean level of 91.20% ($SD = 12.49$) during baseline to 88.40% ($SD = 18.27$) during post-intervention observations. Lisa also demonstrated a slight decrease in levels of engagement from baseline (83.03%) to post (79.97%). Post-intervention levels of academic engagement remained highly variable for four of the students with standard deviations of 18.27 (Kathy), 12.49 (Bob), 17.87 (Lisa), and 10.75 (Ann) at post intervention. Despite the variability found for the majority of the students, variability in two students' academic engaged time after SRSD instruction was greatly reduced. Skylar's variability in academic engagement decreased to a standard deviation of 6.33 (from a baseline standard deviation of 23.78), while Michelle's academic engaged time reduced in variability to a standard deviation of 0.61 (from a baseline standard deviation of 16.97).

Maintenance. Only four students, those in leg 1 and leg 2, were observed during maintenance due to time constraints. Kathy maintained high levels of academic engagement with little variability as indicated by a mean of 92.95 ($SD = 1.34$). This stability in level of engagement was not observed during Kathy's baseline ($SD = 12.49$) or post-intervention ($SD = 18.27$) observations. Although Bob's levels of engagement at maintenance ($M=51.00\%$) dropped from post-intervention levels, percentage of time engaged was highly stable ($SD=0.28$) as compared to baseline ($SD = 26.68$) and post-

intervention ($SD = 12.49$) variability. Skylar and Michelle's level of academic engaged time dropped to a mean of 77.85% and 55.25% respectively with variability ($SD=31.32$ and $SD=30.62$ respectively) increasing greatly from post-intervention variability of 6.33 and 0.61.

Social Validity

Overall, students and teachers rated the SRSD instruction for persuasive writing as favorable according to the IRP-15, the CIRP, and the social validity student interviews. The rating scales were given both pre and post intervention to determine changes in treatment acceptability. The student interview was conducted at post intervention only.

Teacher perspective. Prior to implementation of the SRSD instruction for persuasive writing (and after listening to and watching a PowerPoint presentation of intervention procedures, goals, and expected outcomes), teachers rated the intervention favorably with scores ranging from a low of 71 to a high of 90 (highest score possible). After post-instructional probes were completed, teachers were shown graphs of student progress and then asked to complete the IRP-15. After students received SRSD instruction, two teachers' ratings decreased slightly from pre-intervention levels of 77 (for Bob) and 83 (for Skylar) to 58 and 74 respectively. One teacher commented that she did not know enough about the intervention to assess how it affected the student. Kathy's teacher continued to rate the intervention as highly acceptable with a score of 90. Michelle's teacher rated the intervention as slightly more favorable after instruction with her score increasing by 3 points. Two teachers (both teachers of leg 3 students) did not

return the IRP-15 at post intervention. This may be due to the intervention ending around the same time teachers were beginning preparation for state mandated testing.

Student. Students also rated the intervention favorably at pre-intervention (after listening to and watching a PowerPoint describing the intervention goals, procedures, and expected outcomes) with scores ranging from a low of 32 to a high of 37, with 42 as the highest possible score. After the intervention, five students (Bob, Skylar, Michelle, Lisa, and Ann) reported higher social validity scores, suggesting that the intervention exceeded their expectations. Bob and Ann's post-intervention ratings increased by 5 points, while Skylar's increased by 8 points. Michelle's post-intervention ratings increased by 2 points from pre-intervention ratings, while Lisa's increased by 4 points. Kathy's score decreased slightly from a pre-intervention score of 34 to a post-intervention score of 33. While Kathy indicated that (a) the intervention did not cause problems with her friends, (b) there were not better ways to teach her how to write better, and (c) the intervention would help other children as indicated by giving the highest possible score for these, she gave average scores (threes and fours) for the other inquiries (the intervention was fair, my teacher was too harsh on me, I liked the intervention, and the intervention helped me do better in school). In addition, Kathy commented that she did not like being pulled out of the class and having to make up the work she missed when she got back. Another student commented that the PBS tickets were "not fair to the other students" since the students in this writing intervention were able to earn more tickets than the rest of the class.

Students also viewed the SRSD instruction for persuasive writing favorably as indicated by responses on the Social Validity Interview. Four students said that they

would teach SRSD to others if they were teachers. Kathy did not know if she would teach it or not and Lisa said that she would not teach it, but could not give a reason why not. When asked what part of the POW or TREE strategy they would keep the same, student responses included “cards,” “tricks,” “rockets, cards, and graphic organizers,” and “tickets.” When asked if they would change any part of the POW or TREE strategy, one student suggested that students be allowed to draw their own rockets. Another student recommended reminding students to use POW and TREE somewhere else every day, even when they do not teach SRSD that day. Things students liked about POW included “it helps me with stories and essays” and “I just liked the tickets.”

Students reported what they liked about TREE as “it was easy” and “it helped me remember TREE and the topic sentence and stuff.” Ann reported that *Examine* was hard for her to remember “because it was really hard, but now I got it.” Bob reported getting confused by the letters in TREE and not remembering the differences between them. All students except one liked the rockets since they were able to color them or “bust” them (having more essay elements than required on the rocket graph). Michelle reported not liking the rockets since they were the “same each time.” Three students reported liking the self-statements since they helped them remember the “tricks” to being a good writer. One student shrugged her shoulders when asked what she liked about the self-statements. Kathy said that she did not want to use the self-statements and Bob said he did not like using self-statements because “they take a long time to think about them.”

When asking students about transferring the POW and TREE strategies, several were able to give different places and reasons to use the strategies. Ann said she could use the strategy at her grandmother’s house or in the car. Kathy said she could use them

at home to help her write or in the classroom to help her organize notes. Lisa said she could use it at home to persuade her mom to let her younger brother play outside with her. Michelle said she would use it at home to persuade her mom to buy her toys.

To reiterate, both students and teachers rated the SRSD instruction for persuasive writing as favorable prior to beginning the intervention and following the completion of the intervention. For the majority of the students, the intervention exceeded initial expectations.

CHAPTER V

DISCUSSION

Students with internalizing behavior patterns struggle behaviorally, socially, and academically. Behaviorally, students with internalizing behavior patterns demonstrate an inability to regulate emotions that manifest as extreme anxiety or depression. Socially, these students are often shunned by peers due to inappropriate reactions under normal circumstances (IDEIA, 2004) and overlooked by teachers due to covert behaviors that often go unnoticed in the early years of development (Gresham & Kern, 2004). Academically, students with internalizing behavior patterns (a) have lower academic self-concept than students with externalizing behavior patterns, (b) perform significantly worse than typically developing peers on reading outcome measures (Trout et al., 2003), (c) have substantial writing deficits that span kindergarten through twelfth grades (Nelson et al., 2004), (d) are more likely to receive poorer grades from teachers, and (e) are less likely to receive academic support services (Wagner et al., 2006). Therefore, it is imperative that empirically validated social, behavioral, and academic interventions are available for teachers to use in the general education settings to assist in addressing the social, behavioral, and academic needs of this population.

Recent attention has been placed on improving the reading skills of students with behavioral issues (Barton-Arwood et al., 2005; Nelson, Stage, Epstein, & Pierce, 2005; Wehby, Lane, & Falk, 2005). However, little attention has been given to the area of writing deficits for students with, or at risk for, EBD with only a few studies conducted to

date (Adkins, 2005; Lane et al., in press; Lienemann et al., 2006; Mason & Shriner, in press; Mason et al., 2006). The lack of writing interventions for this population is a concern, given that writing is (a) a primary means by which teachers request information from students (Tindal & Crawford, 2002), (b) a way for appropriately expressing one's feelings (Graham, 2006), and (c) possibly a means for regulating one's emotions (Smyth, 1998). The latter is particularly important for students who internalize emotional responses to their environments. Writing strategies that address more than simple grammar and spelling are needed to address the multiple social, behavioral, and academic concerns of students with internalizing behavior patterns (Lane, 2004). SRSD (Harris & Graham, 1996) instruction seems particularly appropriate for this student population since it provides tools to students to assist in regulating behaviors as well as improving writing knowledge.

Unfortunately, only five investigations have been conducted to date evaluating the effects of a self-regulated writing intervention for students with, or at risk for, EBD in the early elementary grades. Furthermore, homogeneous student characteristics were found in only three studies (Adkins, 2005; Lane et al., in press; Mason & Shriner, in press). In two studies (Adkins, 2005; Mason & Shriner, in press), investigators evaluated the effects of SRSD instruction for students already identified as EBD in early elementary schools. In only one study, participants were systematically identified as at risk for EBD (Lane et al., in press). Other investigations contained heterogeneous populations. For example, Lienemann et al. (2006) and Mason et al. (2006) evaluated the effects of SRSD for writing with heterogeneous groups of elementary students with EBD, LD, ADHD, and speech and language disorders. Furthermore, only one of these studies was conducted

within the context of a three-tiered model of support (Lane et al., in press). Identifying students at risk for behavioral or academic deficits with systematic school wide screeners provides homogeneity to student characteristics which helps in generalizing the effects to similar populations. Furthermore, school-wide screening ensures that all students in the school are considered for additional available supports. Finally, school wide screeners provide a means to identify and intervene in the early years of education rather than waiting until students are in need of remediation rather than prevention intervention (Kazdin, 1987).

Early identification and intervention is imperative for several reasons. First, students with EBD do not improve academically over time and often worsen (Anderson, et al., 2001). Second, the best opportunity to prevent future behavioral and/or academic problems occurs when prevention intervention is provided prior to age 8 (Bullis & Walker, 1994). Finally, as students with internalizing EBD often go unrecognized by their general education teachers (possible due to covert rather than overt behaviors), it is imperative to have systematic screenings in schools to identify and intervene early in students' school careers. Systematic school wide screenings can be conducted effectively within the context of a school-wide PBS model.

The PBS model is an efficient, empirically validated approach to identifying and addressing the needs of students with behavioral and, more recently, academic issues (Lewis & Sugai, 1999). First, PBS models provide preventative primary interventions to address the needs of the school as a whole. The focus on explicit teaching of school wide expectations and positive reinforcement for appropriate behaviors provides the needed support for the majority of the school's populations (about 80%). Second, treatment

integrity and school wide data are collected to determine the extent to which the primary intervention is being implemented as intended and that the majority of the student population is responding positively to the primary intervention. Third, systematic school-wide screeners are implemented to identify students who are non-responsive to the primary prevention program. Students who are identified through a school's PBS model have been exposed to school wide preventative interventions, yet are unresponsive. These students may differ in behavioral, social, or academic characteristics than students identified as at-risk through teacher nominations. It may be that students identified through school wide PBS screeners present more severe, intense issues. Additional studies are needed to examine the differentiating effects of SRSD for students identified as at-risk through systematic school-wide screeners and those identified through teacher nominations (Lane et al., in press).

To date, only one investigation has been conducted to evaluate the effects of SRSD for writing within the context of a PBS model. Lane et al. (in press) evaluated the effects of SRSD for story writing on the quality, number of story elements, and length of stories written by students at risk for EBD and writing concerns. Students were identified through the schools' PBS behavioral and academic screeners. While strong effects were found for SRSD instruction for story writing for all the participants in the study, this study contained only one student with internalizing behavior patterns. The student with internalizing behavior patterns increased the number of essential story elements after SRSD instruction as indicated by PND of 100%. Improvements were also noted in the quality of stories (improving from a baseline average of 3.29, $SD= 1.28$ to a post-instructional average of 5.33, $SD = 0.58$) and length of stories (improving from a baseline

average of 23.29, $SD = 11.31$ to a post-instructional average of 34.67, $SD = 17.67$). In the current study, the range of student characteristics is narrowed by including only students identified as at risk for internalizing behavior patterns and limited writing skills. To ensure no students in this under-identified group were excluded, the writing inclusion criterion was set at the thirty-seventh percentile or below on the TOWL-3. This is in contrast with previous studies in which students were considered at risk for writing problems at the twenty-fifth percentile rank or lower (Graham et al., 2005; Harris et al., 2006; Lane et al, in press; Sexton et al., 1998). Results from this study are consistent with results from previous studies of SRSD instruction for improving the writing skills of students with, or at risk for, EBD.

Effects of SRSD in Writing for Students with Internalizing Behaviors

SRSD instruction for writing has been effective in improving the writing skills of students with, or at risk for, EBD and limited writing skills. Collateral effects on behavior have not been evaluated prior to this study. In the following paragraphs, the academic and behavioral outcomes of this study are discussed.

Consistent with other investigations of SRSD instruction for writing with students with a heterogeneous EBD (Mason & Shriner, in press), results indicate strong effects of SRSD instruction for persuasive writing as a secondary PBS academic intervention for students with internalizing behavior patterns and limited writing skills as indicated by 100% PND from baseline levels to post-intervention and maintenance levels for number of elements. This clear functional relation was replicated across all participants and is

consistent with other studies of students with, or at risk for, EBD (Adkins, 2005; Lane et al., in press; Lienemann et al., 2006; Mason & Shriner, in press; Mason et al., 2006).

While all students in this study were able to produce planning notes during the instructional stages of Support It and Independent Practice, not all used notes during post-instructional and maintenance probes. The absence of notes during the writing process was only concerning if the student was consistently leaving out essential essay elements. As post-instructional and maintenance probes contained the majority of the essential essay elements, the lack of notes was not problematic.

The most pronounced functional relation between SRSD instruction for persuasive writing and writing outcomes of students with internalizing behavior patterns was found in essay elements. All of the students in the current study improved their mean level of number of story elements included in essays from baseline to post-intervention levels as indicated by improvements of 2.17 fold to 6.98 fold. In addition, this high level at post-intervention maintained as indicated by similar mean levels of essay elements on post-intervention and maintenance essay probes. These findings are consistent with previous investigations of SRSD for persuasive writing for younger students with behavioral concerns who have found increases in ranges of the number of elements contained in essays from baseline to post intervention. For example, Mason and Shriner (in press) found that young students with EBD included no more than one essential essay element on baseline essays, but increased to a range of four to six essential elements on essays written during instruction and a range of zero to eight essay elements included on post-intervention essays. These effects have also been found in studies evaluating the effects of SRSD for story writing on the writing performances of students with EBD. For

example, Adkins (2005) found mean level story element increases of 2.63 and 3.71 fold from baseline to post-intervention on student stories.

Quality scores also improved for all students from baseline levels to post-intervention levels although the magnitude of change varied. Strong effects for SRSD for persuasive writing on quality were found for four students (Kathy, Bob, Michelle, and Skylar) with mean level increases on essay quality scores from baseline to post-intervention ranging from 2.17 fold to 5.26 fold. While the other two students improved the quality of their essays as indicated by mean increases of 1.07 fold (Lisa), and 1.57 fold (Ann), their increases were not as substantial as those of the other students, yet still impressive. PND's were low for Lisa (0%) and Ann (33%) due to high quality scores in baseline. These findings are consistent with previous studies investigating the effects of SRSD for persuasive on the quality of essays produced by young students with behavioral concerns (Adkins, 2005; Mason & Shriner, in press). Mason and Shriner (in press) found a 63.43 fold increase in essay quality from baseline to post-intervention. Furthermore, increases in the quality of stories improved after SRSD instruction with students with EBD as indicated by increase of 3.33, 6.30, and 6.42 fold for each participant in the study (Adkins, 2005).

Positive effects of SRSD for persuasive writing were also found for length of essays. Five students substantially increased the number of words written on post-intervention essay probes as indicated by mean level increases of 2.52 fold to 6.52 fold. Only one student indicated a slightly lower mean level increase from baseline to post-intervention (1.25 fold) with a 0% PND. This was due to Lisa's most lengthy passage being produced during a baseline probe. Lisa wrote 118 words on a baseline essay. No

essay written at post-intervention surpassed 118 words. Although Lisa wrote quality and lengthy essays during baseline, the number of essay elements remained below seven. Her post-intervention essays maintained high quality and length, but also contained additional essay elements (10, 7, and 9) indicating that SRSD instruction for persuasive writing is effective in improving writing skills of students who are producing high quality and lengthy essays prior to instruction. Similar effects of SRSD for persuasive writing have been found in other studies of students with behavioral issues (Mason & Shriner, in press) with mean level increases in post-intervention essay length 6.72 fold from baseline levels. In addition, Adkins (2005) found mean increase of 5.98, 6.99, and 9.33 fold in story length from baseline to post-instruction after implementation of SRSD instruction for story writing.

In sum, strong effects were found for SRSD instruction on the number of elements contained in essays and to a lesser extent quality and length of essays produced by students with internalizing behavior patterns and limited writing skills. However, the collateral effects on behavior varied.

In this study, both inappropriate behaviors and academic engagement were observed to determine collateral effects of SRSD for persuasive writing on student behaviors during classroom writing blocks. No studies have been published to date evaluating the collateral effects of SRSD instruction for writing on the academic engaged time or disruptive behavior of students with, or at risk for, EBD. Although not formally assessed in previous writing intervention studies for this population, findings did not replicate findings from reading interventions for students with EBD (Little, in preparation). Studies evaluating the collateral effects of reading interventions on the

behavior of students with, or at risk for, EBD, have found moderate increases in academic engaged time (Wehby et al., 2003) and decreases in disruptive behavior (Barton-Arwood, et al., 2005; Lane et al., 2001; Lane et al., 2002) at post-intervention time points. For example, Wehby et al. (2003) found moderate increases in academic engagement after implementation of a reading intervention.

In this study, clear functional relations between the introduction of the intervention and changes in engagement could not be stated, although two participants exhibited increases of 1.32 and 1.40 fold in mean levels of engagement with variability decreasing from baseline levels of 23.78 and 16.97 to post-intervention levels of 6.33 and 0.61. This pattern was not consistent across all participants. Although the mean level increases for both students were minimal, decreases in variability were noted. This is important since variability in behavior makes intervention efforts more difficult, as causes of variability should be sought out and held constant prior to beginning interventions (Kennedy, 2005). Unfortunately, the decreased variability in academic engagement of Skylar and Michelle did not maintain with variability increasing above baseline levels ($SD = 31.32$ and $SD = 30.62$, respectively). In addition, no functional relation was observed for academic engagement for the other four students with data remaining highly variable during both baseline ($SD = 12.49$, $SD = 26.68$, $SD = 13.05$, $SD = 21.81$) and post-intervention ($SD = 18.27$, $SD = 12.49$, $SD = 17.87$, $SD = 10.75$). The inability to replicate findings from the reading research could stem from attempts to generalize to a different setting, instructor, and instructional task. Future studies should attempt to observe student behavior in near generalizations conditions. For example, students could be observed in a different setting (i.e., the general education setting);

however, the researcher who conducted the instruction could give students an SRSD instructional prompt. This would limit generalization to one environmental factor rather than several.

While changes in academic engagement did not replicate findings from reading intervention studies for students with, or at risk for, EBD, the relatively non-existent disruptive behaviors did not allow for comparisons between study conditions.

The positive effects of SRSD instruction for persuasive writing have strong implications for future practice. While the effects on behavior were not established, the positive impact SRSD instruction has on the writing abilities of students with internalizing behavior patterns and writing concerns is promising. Despite the promising effects of SRSD as a powerful intervention for improving the writing skills of students with internalizing behavior patterns, findings from this study should be interpreted in light of some limitations.

Limitations and Future Directions

While functional relations between the end of SRSD instruction for persuasive writing and improvements in essay quality, length, and number of elements contained are evident in this study, these findings must be interpreted in the light of the following limitations. First, student characteristics limit the population to which the results can be generalized. Second, the setting in which the behavior observations were conducted did not always include writing instruction or activities. Third, generalization of the SRSD strategies to other people, settings, or genre was not measured. Fourth, maintenance probes for the students in the last leg of the study were not obtained due to time

limitations. Finally, as teachers were not used as SRSD interventionist and were not given specifics of the intervention, the IRP-15 may not have been a valid measure of teachers' perceptions of SRSD instruction for writing with students in this study.

Student Characteristics

First, the results of this study can only be generalized to similar populations. The study was conducted in a high performing inclusive district as indicated by above average scores on state mandated tests. The socio-economic status of the district was also above average with only 5.7% qualifying for free or reduced lunch rates although free and reduced meal rates were slightly higher than the district mean for the schools that participated in this study (6.7%, 13.7%, and 8.7%). All schools utilized a full inclusion model for special education and 100% of their teachers were fully certified. While SRSD instruction for persuasive writing was effective in this environment, further investigations should evaluate the effects of SRSD on writing and behavioral performances of students with internalizing behavior patterns in less optimal conditions.

Another characteristic that must be taken into account is the method of identifying students as having internalizing behavior patterns and limited writing skills. First, the SSBD identifies only the top three students with internalizing behavior patterns. This exclusionary procedure is part of the systematic screening process and not a limitation of this study. However, this exclusionary procedure, while allowing for monetary and time efficient identification of students with the most severe problems, may miss the identification of students with internalizing behavior patterns in need of additional supports. Future studies should use multiple screening measures to ensure that no

students with internalizing behavior patterns are excluded. For example, the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) could be used in conjunction with the SSBD to identify students at risk for behavioral concerns. Second, the TOWL-3 criterion for inclusion in this study was more relaxed than in previous studies. Variability in the TOWL-3 scores ranged from the ninth percentile to the thirty-seventh percentile. Although this was done to ensure the inclusion of all students with internalizing behavior concerns who also have limited writing abilities, this may have led to variability in the quality of baseline essays (reflecting the higher percentile rank on the TOWL-3). The variability in the quality of baseline essays may have then led to variability in responses to the intervention. Future studies should group students with similar scores to demonstrate the effect of SRSD for students with internalizing behavior patterns with both higher and lower writing abilities.

Setting of Behavioral Observations

Second, observations of students' academic engagement and inappropriate behaviors were not always conducted during classroom writing activities. While behavior observations were conducted during scheduled writing times, teachers were not always conducting writing instruction. The criteria for the setting of the behavior observations had to be relaxed since teachers often did not teach writing during their scheduled writing blocks. Examples of activities other than writing that were observed during the scheduled writing block included center time, teacher lead story reading, and partner reading. The lack of a functional relation between SRSD instruction and behavior during classroom writing activities could be a result of attempts to generalize beyond the training setting

and to different tasks (Gresham, 1994). It may be that SRSD instruction has a positive effect in increasing academic engagement in writing activities, but not other activities such as literacy block. The variability in behavioral data could be a result of the relaxed setting criteria rather than an indication that SRSD is not consistently effective in changing academic engaged time. Future studies should focus on completing behavioral observations during classroom writing instruction only. This can be accomplished by having prescribed writing activities for the classroom teachers to conduct during behavioral observations.

Maintenance

Third, maintenance scores for third leg students were not collected due to time constraints. While four demonstrations for maintenance are provided, the collection of maintenance on the third leg students would have provided additional information on the effects of SRSD instruction for writing with students with internalizing behavior patterns and limited writing skills. Lane et al. (in press) recommends evaluating maintenance effects at regular intervals. While this is difficult to accomplish when conducting research in classroom settings, maintenance in this study was collected at consistent intervals of 5 weeks and 6 weeks post instruction for legs 1 and 2. Maintenance for leg 3 was not collected due to time constraints. Data collected at maintenance time points indicated continued improvements in number of elements, length, and quality of essays. In addition, maintenance probes indicated continued decreases in total disruptive behaviors.

Generalization

A final limitation is the lack of generalization assessment. Since generalization to other settings, people, or genres was not formally tested, the extent to which students are using the SRSD strategies in other settings or with other people is unclear. Although not formally tested, some evidence of generalization was observed with Skylar and Lisa. During post-instructional probes, Skylar brought an essay that she had written at home to her SRSD instructor. She wrote an essay on why one should brush his or her teeth. The essay contained all the essential elements and provides evidence that the SRSD strategy for persuasive writing is generalizing to other settings. Lisa also brought an essay to her instructor during the SRSD instructional phase. Lisa told her instructor that she was writing persuasive essays at home to persuade her mother to let a friend come over. She tried to use her strategy for the first time at home at bedtime. She tried to persuade her mother to let a friend come over at 8:00 pm on a school night. She said it did not work because she didn't have enough reasons. She tried to persuade her mother again the following day (earlier in the day) using additional reasons and she said it worked. Her friend was allowed to come over. She then wrote an essay to her teacher persuading her to give the class a longer recess time. She showed her SRSD instructor the essay first, and then gave it to her teacher upon returning to the class. She was again successful in persuading an adult other than her SRSD instructor; the teacher gave the entire class 5 min of extra recess that day. While not formally tested, at least two students were generalizing the strategy to other settings and persons. Additional research should include the formal testing of generalization of SRSD instruction to other settings, persons, or genres.

Teacher Social Validity

Social validity can be defined as (a) social significance of the goals of the intervention, (b) social acceptability of the intervention procedures, and (c) the social importance of the intervention outcomes (Wolf, 1978). In this study, the IRP-15 was given to teachers to determine how favorably they viewed the goals of the SRSD intervention, the intervention procedures, and the importance of the outcomes. The goals of the SRSD intervention were presented to teachers via a PowerPoint prior to the onset of the intervention. Teachers were also given a graph of student progress at the end of the post-instructional probes, but prior to completing the post IRP-15. The IRP-15 adequately addressed the extent to which teachers viewed SRSD goals and outcomes as appropriate. Because teachers were not interventionist, their ratings of the intervention procedures reflect their acceptability of the intervention procedures employed. For example, teacher ratings reflect the acceptability of conducting the intervention outside the classroom setting, removing students from the classroom 3 to 4 days per week, and conducting direct observations of students and teacher instruction in the classroom. Future studies should utilize additional measures (i.e., social validity interviews specific to the study) to identify social acceptance of interventions not directly taught by the classroom teacher.

SRSD Instructors

While not a limitation, the use of researchers rather than the general education teacher to conduct the intervention is a design feature that hinders generalizability. While researchers are often former teachers and highly effective instructors, the use of the students' general education teachers may promote generalization and maintenance. It is

also important to note that SRSD is not designed to be implemented for a limited time. As with all instruction, SRSD is designed to be a continuous instructional strategy with new skills being continually added to the previously established repertoire. Future research should focus on classroom teachers as instructors for SRSD instruction. Not only will this promote generalization and maintenance, but it provides teachers with an empirically validated intervention for long-term use with their current and future classes.

Results of this study should be interpreted in light of the previous limitations. Limitations can be found in participant characteristics, setting in which the study was conducted, lack of formal measurement of generalization, and lack of maintenance probes for the two students in the last leg of the study. Despite the previously mentioned limitations, strong functional relations between the end of SRSD instruction and writing performances of students with internalizing behavior patterns and limited writing skills was observed. Furthermore, this study extends the current literature base in three important manners.

Conclusion

This study demonstrates the strong effects of SRSD instruction for writing for students with behavioral issues. These findings are consistent with findings from other studies evaluating the effects of SRSD instruction on the writing performance of students with, or at risk for, EBD. The present study extends the literature base in three ways.

First, this study investigates the utility of SRSD for writing to a new population of students (students with internalizing behavior patterns and limited writing abilities). This

is important considering the possible emotional (Smyth, 1998) and academic (Tindal & Crawford, 2002) benefits of improving the writing skills of this population.

Second, it extends the Lane et al. (in press) study by evaluating a different genre (persuasive rather than story writing). It may be that persuasive writing provides more adaptive skills than would story writing for this population as students with internalizing behavior patterns are provided with an additional tool to appropriately request needs and wants.

Third, behavioral outcomes were measured to determine collateral effects of an academic intervention on behavior. Partial evidence exists that indicates improvements in behavior of students after being provided with interventions designed to increase reading skills (Barton-Arwood, et al., 2005; Lane, Fletcher, Carter, Dejud, & DeLorenzo, in press; Lane, O'Shaughnessy, Lambros, Gresham, & Beebe-Frankenberger, 2001; Lane, Wehby, Menzies, Gregg, Doukas, & Munton, 2002; Scott & Shearer-Lingo, 2002; Spencer, Scruggs, & Mastropieri, 2003; Wehby, Lane, & Falk, 2005). It may be that students with, or at risk for, EBD display inappropriate behaviors to avoid difficult tasks. If students are provided with tools to be successful academically, it may be that inappropriate behaviors will decrease and engagement would increase as students are better able to access and understand academic information. This study provides additional evidence that academic engagement stabilizes (at least for two of the participants) and disruption decreases after the implementation of an academic intervention.

Findings from this study provide support for the use of SRSD instruction for persuasive writing, as a secondary PBS intervention, in improving the quality, length, and number of elements in essays produced by students with internalizing behavior patterns

and writing concerns. Finally, results support the feasibility of identifying students who may be in need of additional supports through the use of systematic behavioral and academic screeners implemented as part of a school-wide PBS model.

APPENDIX A

Lesson Plans

WRITING TO PERSUADE – 2ND GRADE
POW + TREE with TRANSFER: LESSON # 1 – Part 1

Instructor: _____

Date: _____

Student(s): _____

Purpose: Develop Background Knowledge, Discuss It

Objectives: Introduction to POW, writing to persuade, and TREE

Materials needed: Mnemonic charts and paper example (for recess), TREE graphic organizer, transition word chart, POW practice cards, pencils, scratch paper, PBS tickets and student folders

Behavioral Component: Review school-wide behavior goals and tell student that PBS tickets can be earned in writing lessons, and will be turned in to their classroom box. Fill in ticket with name, date, etc. Use high rates of positive feedback throughout the lesson, and use ignoring, etc.

_____ I. Introduce Yourself

Introduce yourself as a writing teacher. Tell the student you're going to teach him/her some of the "tricks" for writing. First, we're going to learn a strategy, or trick, that good writers use **for everything** they write. Then we are going to learn the trick, or strategy, which helps you write a paper that, tells the reader what you believe or what you think about something. This is called **writing to persuade**.

_____ II. Introduce POW

A. Put out the POW + TREE chart so that only POW shows.

B. Emphasize: POW is a trick good writers often use, for many things they write.

C. Go over parts of POW, discussing each. (P = Pick an idea to start with – this is an idea in our head; O = Organize my notes – I will teach you a trick for organizing your notes later; W = Write – we will use our notes to help us say more as we write). Describe and discuss the concept of notes. Use examples; "Your teacher uses notes when she creates a web on the board; your parents use notes when they write things on a calendar or a grocery list." Have the student generate some examples on their own. Emphasize that a good way to remember POW is to remember that it **gives them POWER for everything they write**.

D. Practice POW; Turn the chart over. Practice reviewing what each letter in POW stands for and why it is important (good writers use it often, for many things they write). Help as needed. Have the student write out POW on scratch paper and explain out

loud what each letter stands for. Repeat until the student knows what POW stands for and why it is important.

_____III. Discuss Writing to Persuade

Discuss the word persuade to be sure this makes sense to them. Ask if they have heard this word. Discuss what makes writing to persuade powerful- they may not be at all familiar with this, so help and be sure to include:

A. Writing to persuade that is powerful tells the reader what I believe, gives the reader at least three reasons why I believe it, and has an ending sentence. **(You will be practicing this with them, so you just want to be sure they have the idea here).**

B. Writing to persuade that is powerful **makes sense and has several parts** - we will learn a trick for remembering the parts of writing to persuade. This trick is the trick we will use to help us organize our notes.

_____IV. Introduce TREE

Introduce TREE- uncover the rest of the chart. “Let’s look at what the parts of writing to persuade are.” Have students look at the chart. Go over each part of TREE, and how it relates to a living TREE.

A. The topic sentence is like the trunk – it is strong and every part of the tree is connected to it.

B. The reasons are like the roots. They support the trunk. The more roots (or reasons) the stronger the trunk will be.

C. The ending is like the earth. It wraps around the tree (like wrap it up).

D. The last part of TREE is **examine**. Look at the picture of the girl. She is looking carefully at the tree with a telescope making sure all the parts are there. Spend some time discussing the word **examine**. **Examine means to look closely**. Examples: examining something with a microscope, you can examine something closely using a magnifying glass etc. **We will be looking closely - examine - with our eyes.**

_____V. Find TREE

Now we're going to read and **examine** a writing to persuade paper to find out if the writer used all of the parts - what I believe, at least three reasons why, and an ending sentence. (Leave out the TREE chart where students can see it.)

A. Give each student a copy of the first writing to persuade paper; ask students to read along silently while you read the paper out loud. Tell them to raise their hands when they hear what the writer believes, each reason why, and an ending sentence. Be sure each part is identified.

B. Give each student a pencil. When they have identified the topic sentence have them underline it.

C. Next tell the students that you will be looking for transition words – **the words the writer used to show that a reason is being given**. Show them the chart of transition words and have them locate the ones in the paper. Have the students circle the transition words. Reinforce that the transition words help you to find the reasons in the paper! Spend some time discussing this. Label each reason with a number.

D. Have the students locate the ending sentence and underline it.

E. Examine the parts - are they all there?

_____VI. Introduce TREE Graphic Organizer

Introduce the TREE graphic organizer. Show the students how to write the parts in **note form** on the organizer. Make sure you **number the reasons** as you are doing this. It is OK to move around the chart out of order as you find the parts - they don't have to be found in order. When all parts have been identified complete the last step – **examine** – checking the “yes” space.

_____VII. Practice TREE Reminder

Practice the TREE reminder and what each letter means. Turn over chart. Ask student to tell you the "writing to persuade parts reminder", and what each letter stands for. Then, ask student to write the reminder on scratch paper, and tell what each letter stands for. If student have trouble, turn chart back over and allow them to look. Repeat several times till the student gets comfortable. If you have extra time, use POW cards for extra practice.

_____X. Lesson Wrap Up

A. Announce test! (no grade!) next session. They will come and write out POW and TREE and tell what they mean from memory.

B. Give each student their own folder and a copy of the TREE parts reminder chart. Have student put today's work and their charts in their folder and give the folder back to you ~ explain you will bring the folder to every class.

Should Children Have to Go Outside for Recess?

Everyone should have to go outside for recess.

One reason everyone should go outside is because children need to move their bodies. Another reason for going outside is it is hard to sit in one place all day. Another good reason for going outside is that you get to meet kids from different grades and classes.

A final reason for going outside is to play sports.

These are the reasons why I believe kids should go outside for recess.

Should Children Have to Go Outside for Recess?

Everyone should have to go outside for recess (topic). **One** (transition word) reason everyone should go outside is because children need to move their bodies. **Another** (transition word) reason for going outside is it is hard to sit in one place all day. **Another** (transition word) good reason for going outside is that you get to meet kids from different grades and classes. A **final** (transition word) reason for going outside is to play sports. These are the reasons why I believe kids should go outside for recess (ending).

WRITING TO PERSUADE – 2ND GRADE
POW + TREE with TRANSFER: LESSON # 1 – Part 2

Instructor: _____

Date: _____

Student(s): _____

Purpose: Develop Background Knowledge, Discuss It

Objectives: Review and practice POW, writing to persuade, TREE; identification of persuasive writing elements in paper example; establish concept of transfer

Materials Needed Mnemonic charts and paper example (for country), TREE graphic organizer, transition word chart, POW practice cards, “I transferred my strategies” chart, pencils, scratch paper, student folder, PBS tickets

Behavioral Component: Review school-wide behavior goals and tell the student that PBS tickets can be earned in writing lessons, and will be turned in to their classroom box. Fill in ticket with name, date, etc. Use high rates of positive feedback throughout the lesson, and use ignoring, etc.

____ **I. Test POW and TREE**

Test to see if the student remembers **POW** and the **TREE reminder**.

A. Give the student a piece of scratch paper. Ask the student to **write down POW** – then ask student what each letter stands for, and why it is important for writing stories. If student has trouble remembering POW, practice it using rapid fire with the cue cards.

Rapid Fire Practice

Give the student a set of cue cards (for POW/TREE, start practice with cue cards with picture cues then wean the student to cards without picture cues). Say, “To help you remember the parts, we are going to do an exercise called rapid fire. We will take turns saying the parts. This is called rapid fire because you are trying to name the parts as rapidly as you can. If you need to look at the cue card, you may; however, don’t rely on the card too much because I am going to put the card away after several rounds of rapid fire.” Allow the student to paraphrase but be sure intended meaning is maintained. Do with cue cards and without. If response is correct, make brief positive comment. If incorrect, prompt by pointing to cue card.

B. Remind the student that **O** needs a trick for organizing. Ask the student what the trick is for organizing my notes for writing to persuade. Ask student to **write out the writing to persuade reminder mnemonic/trick** on the scratch paper. The student should write: **TREE**. If the student has trouble, be supportive and prompt as needed.

C. Now ask the student what each part of the writing to persuade reminder stands for.

D. It is essential that the student memorize the reminder. If the student is having trouble with this, spend a few minutes practicing it using rapid fire with the cue cards.

E. Tell the student you will test him/her on it each day to make sure he/she has it. Remind the student that he/she can practice memorizing it.

II. Find TREE

Now we're going to read and **examine** a writing to persuade paper to find out if the writer used all of the parts - what I believe, at least three reasons why, and an ending sentence. (Leave out the TREE chart where students can see it.)

A. Give each student a copy of the first writing to persuade paper; ask students to read along silently while you read the paper out loud. Tell them to raise their hands when they hear what the writer believes, each reason why, and an ending sentence. Be sure each part is identified.

B. Give each student a pencil. When they have identified the topic sentence have them underline it.

C. Next tell the students that you will be looking for transition words – **the words the writer used to show that a reason is being given**. Show them the chart of transition words and have them locate the ones in the paper. Have the students circle the transition words. Reinforce that the transition words help you to find the reasons in the paper! Spend some time discussing this. Label each reason with a number.

D. Have the students locate the ending sentence and underline it.

E. Examine the parts - are they all there? As the student examines to be sure all parts are there: what I believe (topic), reasons why (at least 3), and ending; you write each in the appropriate space on the graphic organizer: **do not use full sentences – do this in note form**. Be sure that the student understands that you are writing in **note form!**

III. Introduce Transfer

Tell the student: **“We have a goal for our POW and TREE strategies.”**

A. ****Goal 1 for next time: use all or parts of POW and/or TREE in other classes or for other writing tasks. Brainstorm together some classes or other writing tasks they could use both POW and TREE for, being sure to note that we should use POW with TREE whenever we use TREE. Other ideas could be: letters to friends, reports on special topics, writing for a school newsletter, writing to a leader like the principal or the president; any writing where you wanted to tell someone your opinion or convince them you are right. Briefly note that for some tasks, all parts of the TREE trick might not be**

right to use - so what could we do? (Change TREE to fit the kind of paper we need to write; don't use all of TREE if it doesn't make sense).

B. **Tell them to report back to you on using all or any parts of POW/TREE next time (for example, students might report making notes for a writing task before they wrote, this would count). Show student the “I transferred my strategies” chart and explain that **once a week** you will write down each time he/she tells you about using all or any part of POW/TREE outside of this class. Briefly discuss the word “**transfer**” – transfer means to move (like I transferred schools means that I moved from one school to another). Emphasize that you want him/her to **transfer** what they learn about POW and TREE from this class to other classes and other writing tasks.

____ **IV. Lesson Wrap Up**

A. Announce test! (no grade!) next session. He/she will come and write out POW and the writing to persuade reminder and tell what they mean from memory.

B. **Remind the student to transfer the strategy, that you will ask him/her next time if he/she transferred, and that you will be recording on their chart later in the week.

C. Give the student his/her folder, a copy of the writing to persuade reminder chart, and a copy of the “I transferred my strategies” chart. **Have them put today's work and charts in their folder and give the folder back to you – explain that you will bring the folder to every class.**

Is it better to live in the city or the country?

I think it is better to live in the country than the city. First, country living is fun because you can play in the fields and woods. Second, when you live in the country you get to work with the animals.

Third, the country has clean air. Finally, the country is so quiet at night that you can hear the bugs sing.

The country is where I would like to live because then I would have more fun, feel better, and get to be with the animals.

Is it better to live in the city or the country?

I think it is better to live in the country than the city (topic). **First** (transition word), country living is fun because you can play in the fields and woods. **Second** (transition word), when you live in the country you get to work with the animals. **Third** (transition word), the country has clean air. **Finally** (transition word), the country is so quiet at night that you can hear the bugs sing. The country is where I would like to live because then I would have more fun, feel better, and get to be with the animals (ending).

WRITING TO PERSUADE – 2ND GRADE
POW +TREE with TRANSFER: LESSON # 2

Instructor: _____

Date: _____

Student(s): _____

Purpose: Review POW & TREE; Model; Record Self Instructions

Objectives: review POW and TREE, and Self instructions; model

Materials needed: Mnemonic chart, TREE graphic organizer, transition word chart, paper, pencils, lined paper, practice prompt: toys, practice papers (for school, against recess), self-instructions sheets, transfer sheets, blank graph, PBS tickets and student folder

_____**I. Test POW and TREE**

Test to see if the student remembers **POW** and the **writing to persuade reminder** by writing the mnemonic out on a piece of scratch paper. Spend some time practicing the parts out loud. Use the rapid fire cards to play a game. Tell the student you will test them on it each day to make sure he/she has it. Be sure the student remembers that the **writing to persuade reminder** is the trick for **O**.

_____**II. Find TREE**

Put out TREE reminder chart, graphic organizer and transition chart. Go through two more paper examples (for school and against recess) and have student verbally identify the paper parts - what the writer believes, at least three reasons, and an ending sentence. Be sure to model writing in note form. **For each of these papers, ask the student if they can think of more reasons! Number and write the reasons on the graphic organizer. Ask the student what transition words could be used with the additional reasons. BE SURE TO EXAMINE PARTS! Are they all there?**

_____**III. Model Using Self-Statements for “P” in POW**

Lay out a copy of the TREE graphic organizer. Then explain: “Remember that the first letter in POW is P - pick my idea. Today we are going to practice how to write to persuade - review what that means if necessary. To do this we have to be creative, we have to think free.

Have a copy of your self-statement sheet available. Use problem definition, planning, self-evaluation, self-reinforcement, and coping statements as you work. Use statements that are similar to those employed by the student. Ask the student to help you with ideas, but be sure you are in charge of the process.

A. Read aloud the practice prompt: toys. Model things you might say to yourself when you want to think of a good idea. For example: "I have to let my mind be free." "Take my time; a good idea will come to me." "Think of new, fun ideas." You can also start with a negative statement and model how a coping statement can help you get back on track. For example, "I can't think of anything to write! Ok, if I just take my time, a good idea will come to me." Explain to the student that things you say to yourself out loud and in your head help you get through the writing process. I might think in my head, what is it I have to do? I have to write to persuade. A good persuasive paper makes sense and has all the parts.

B. Ask the student to come up with things he/she might say in his/her head to help him/her think of good persuasive ideas and good parts. If the student is having trouble, help him/her create a statement or let him/her "borrow" one of yours until he/she come up with his/her own. Have student record 1-2 things they can say to help think of good ideas on their self-statement sheet.

____ IV. Discuss Using "O" in POW

Tell the student the second letter in POW is O –ORGANIZE my notes. I am going to write to persuade today with your help. I need a trick for O. The trick is my write to persuade reminder TREE. I will use POW and TREE to help me organize and plan my writing to persuade paper. **I will use this page to make my notes and organize my notes; you will do this too the next time you write a paper.** Briefly review - point at - the parts of writing to persuade on the graphic. Review - what should my goal be? Write to persuade. **Remind them that good and powerful writing to persuade tells the reader what you believe, gives at least three reasons why, and has an ending sentence. Also, like stories, good writing to persuade papers are fun for me to write and for others to read, and make sense.**

Now I can do O in POW – Organize my Notes. This helps me plan my paper. I can **write down ideas** for each part. I can write ideas down in different parts of this page as I think of ideas (be sure to **model moving out of order during your planning**). **First, what do I believe - what do I want to tell the reader I believe?** (Now - talk out and fill in notes for **Topic Sentence**). Good! I like this idea! Now I better figure out **at least 3 reasons**. **Let my mind be free, think of good ideas.** (Now talk out and briefly write notes for at least 3 reasons- not in full sentences - **use coping statements at least twice**.) Be sure to number your reasons. What do I need to do next? I need to wrap it up - write notes for **ending sentence**. After generating notes for all the parts say - Now I can **look back at my notes and see if I can add more notes for my paper - actually do this** - model it - use coping statements). I can also **look for ideas for good word choice or million dollar words - do this**. Then model **examining the notes for all parts**.

____ V. Model writing a paper using POW and TREE

- A. Keep the POW and TREE graphic and transition words chart out; also the students' self-statements sheets.
- B. Model the entire process; writing to persuade as you go (using the practice prompt). (Please print so student can easily follow)

Now I can do W in POW - write and say more. I can **write to persuade and think of more good ideas, TRANSITION WORDS, and million dollar words as I write.** Now - talk yourself through writing the paper; the student can help. Use a clean piece of paper and print. **Start by saying "How shall I start? I need to tell the reader what I believe, I need a topic sentence."** Then pause and think, then write out the sentence. Do be sure to **add 1-2 more ideas and million dollar words** not on your plan as you write. **Model selecting and using transition words.** Don't hurry, but don't slow it down unnaturally. Also, at least 2 times, **ask yourself, "Am I using good parts and, am I using all my parts so far?"** Use coping statements. Also ask yourself, "Does my paper make sense? Will the reader believe my reasons?" Model writing the ending sentence. Model **examining** paper for all parts. When paper is done, say "**Good work, I'm done. It'll be fun to share my paper with others.**"

____ VI. Self-Statements for Story Writing

Add to student's self-statements lists. Ask the student if they can remember: 1) the things you said to yourself to get started? 2) things you said while you worked (try to get some creativity statements, coping statements, statements about remembering the parts, and self-evaluation statements) 3) things you said to yourself when you finished. (Tell him/her if he/she can't remember and discuss each as you go). Make sure each student adds these to his/her list:

- what to say to **get started**. This must be along same lines as "**What is it I have to do? I have to write to persuade using TREE.**" - but in students' own words.
- 1-2 things to say **while you work**: self-evaluation, coping, self reinforcement, and any others he/she likes (in student's own words).
- things to say **when you're finished** (in students' own words).
- Note that we don't always have to think these things out loud; once we learn them we can think in our heads or whisper to ourselves.

____ VII. Introduce Graphing Sheet/Graph the Paper

Ask student: does this paper have at least 5 parts? Find each part and fill in graph. Color stars for each reason over the 3 required and circle a star around this rocket for each million dollar word used.

_____ **VIII. Lesson wrap-up:**

A. Keep your paper and graph.

B. Remind of POW and TREE **test** again next time.

C. ** If appropriate remind student to transfer the strategy, that you will ask them next time if they transferred, and if so he/she will fill in the transfer chart.

Should children have to go to school?

Kids need to go to school. One reason why it is important to go to school is because at school you make friends. Another reason why school is important is because this is where you learn to read and write. A different reason is that you learn about science and history. One more reason why kids should go to school is because school can be a lot of fun. I know that some kids might say, “No school.” But I disagree. I say, “School is fun, it helps you make new friends, and teaches you what you need to know.”

Should children have to go to school?

Kids need to go to school (topic). **One**

(transition word) reason why it is important to go to school is because at school you make friends.

Another (transition word) reason why school is important is because this is where you learn to read and write. **A different** (transition word) reason is

that you learn about science and history. **One more** (transition word) reason why kids should go to school

is because school can be a lot of fun. I know that some kids might say, “No school.” But I disagree. I

say, “School is fun, it helps you make new friends, and teaches you what you need to know (ending).”

Should children have to go outside for recess?

Not everyone likes to play outside for recess.

First, some kids get sick when they go outside.

Second, some kids need recess time to finish their homework. Third, it is no fun to go outside when it is raining or it is too cold. Fourth, there are a lot of games to play inside. Fifth, recess is no longer when you are inside because you do not waste time in the hallway. All in all, it is better if it is up to the kid.

Some kids will go outside and others will not.

Should children have to go outside for
recess?

Not everyone likes to play outside for recess

(topic). **First** (transition word), some kids get sick

when they go outside. **Second** (transition word),

some kids need recess time to finish their homework.

Third (transition word), it is no fun to go outside

when it is raining or it is too cold. **Fourth** (transition

word), there are a lot of games to play inside. **Fifth**

(transition word), recess is no longer when you are

inside because you do not waste time in the hallway.

All in all, it is better if it is up to the kid. Some kids

will go outside and others will not (ending).

Should children give some of
their toys to other children
who do not have toys?

WRITING TO PERSUADE – 2ND GRADE
POW +TREE with TRANSFER: LESSON # 3

Instructor: _____

Date: _____

Student(s): _____

Purpose: Review POW & TREE, Self-Instructions, Collaborative Writing

Lesson Overview: The student and teacher will collaboratively write a persuasive paper using **POW + TREE**. The teacher will need to provide the support needed to insure the student is successful in writing a persuasive paper that has all 5 parts. The teacher should reinforce the student’s use of self-instructions, good word choice, a paper that makes sense, and “million dollar” words.

Objectives: Review and practice POW, TREE; identification of parts in example papers; reinforce transfer and write collaboratively

Materials needed: Mnemonic chart, example papers (against computer, for city), TREE graphic organizers, transition word chart, Transfer Sheet, Self-Instructions Sheet, Rocket Graphing Sheet, practice prompt: summer, paper, pencils, scratch paper, student folder, PBS tickets

Behavioral Component: Review school-wide behavior goals and tell student that PBS tickets can be earned in writing lessons, and will be turned in to their classroom box. Fill in ticket with name, date, etc. Use high rates of positive feedback throughout the lesson, and use ignoring, etc.

____ I. Test POW and TREE

Test to see if the student remembers **POW** and the **writing to persuade reminder** by writing the mnemonic out on a piece of scratch paper. Spend some time practicing the parts out loud. Use the rapid fire cards to play a game. Tell the student you will test them on it each day to make sure he/she has it. Be sure the student remembers that **TREE** is the trick for **O**.

____ II. Find TREE

Put out TREE reminder chart, graphic organizer and transition chart. Go through two more paper examples (against computer, for city) and have student verbally identify the paper parts - what the writer believes, at least three reasons, and an ending sentence. Be sure to model writing in note form. **For each of these papers, ask the student if they can think of more reasons! Number and write the reasons on the graphic organizer. Ask the student what transition words could be used with the additional reasons. BE SURE TO EXAMINE PARTS! Are they all there?**

____ III. Transfer

Review the meaning of transfer briefly. Ask student to orally report back one time they used or could have used all/ parts of POW and/or TREE in other classes or for other kinds of writing tasks. If necessary, brainstorm together some classes or other writing tasks they could use both POW and TREE for, being sure to note that we should use POW with TREE whenever we use TREE. Other writing tasks could be: letters to friends, reports on special topics, writing for a school newsletter, writing to a leader like the principal or the president, to convince them of what you believe in. Briefly note that for some tasks, all parts of the TREE trick might not be right to use - so what could we do? (Change TREE to fit the kind of paper we need to write; don't use all of TREE if it doesn't make sense).

____ IV. Collaborative Writing

Put out TREE reminder chart and transition word chart. Give student a blank graphic organizer and ask them to get out their self-statements list. Put out practice prompt: summer. This time, let the student lead as much as possible, but prompt and help as much as needed. It should be a collaborative process.

1. Say, "Remember that the first letter in **POW** is **P** - PICK my IDEA." Refer student to his self-statements for creativity or thinking free. Help the student decide what they believe and start to think of good reasons why.

2. Say, "The second letter in **POW** is **O** - ORGANIZE my NOTES. I will use TREE to help me organize and plan my paper. Remind students TREE is the trick for O. **I will use this page to make my notes and organize my notes.** Review - what should my goal be? Write to persuade. **Good and powerful writing to persuade tells the reader what you believe, gives at least three good reasons why, and has an ending sentence. Also, good writing to persuade is fun for me to write and for others to read, and makes sense.** After students have generated notes for all the paper parts say - remember to look back at my notes and **see if I can add more notes for my paper parts - help them actually do this.** Remind them also to **look for more ideas for good word choice or million dollar words - help them do this.** Make sure that the students **examine** the parts of TREE in the notes.

3. The last letter in **POW** is **W** - WRITE and SAY MORE. Remind them to use the transition chart to find transition words for their papers. Encourage and remind them to start by saying "What is it I have to do here? I have to write to persuade - a good paper to persuade has all the parts and makes sense." I can write my paper and think of more good ideas or million dollar words as I write. Help students as much as they need to do this, but try to let them do as much as they can alone. Encourage them to use other self-statements of their choice while they write. If students do not finish writing today, they can continue at the next lesson.

____ V. Graph Parts

Begin a Rocket Graphing Sheet for the student. Have the student shade in the graph to equal the number of parts they included – have the student determine- does their paper have at least 5 parts - then fill in graph. For each reason over 3 written they may color in a star.

Reinforce them for reaching 5 or more. Tell the student, “You blasted your rocket!” Circle a star around that rocket for each million dollar word used.

_____ **VI. Lesson wrap-up:**

A. Have each student put their work and charts in their folder.

B. Remind of POW and TREE **test** again next time.

C. Remind the student that they will fill in the transfer chart again next time.

Should all children learn how to use the computer?

I do not think that all children should have to learn to use a computer. There are three reasons why I believe this. First, some kids do not have a computer at home. Second, some kids have trouble with typing. Third, some computers are always breaking down. So please, don't make all children learn how to use a computer.

Should all children learn how to use the computer?

I do not think that all children should have to learn to use a computer (topic). There are three reasons why I believe this. **First** (transition word), some kids do not have a computer at home. **Second** (transition word), some kids have trouble with typing. **Third** (transition word), some computers are always breaking down. So please, don't make all children learn how to use a computer (ending).

Is it better to live in the city or country?

I think that it is better to live in the city. First, there are many more things to do in the city. My second reason is the city has lots of stores that sell toys. My third reason is the city smells better because it has no cows. My final reason is the city has a lot of different kinds of people. If you ask me, I would take the city every time.

Is it better to live in the city or country?

I think that it is better to live in the city (topic).

First (transition word), there are many more things to do in the city. My **second** (transition word) reason is the city has lots of stores that sell toys. My **third** (transition word) reason is the city smells better because it has no cows. My **final** (transition word) reason is the city has a lot of different kinds of people.

If you ask me, I would take the city every time.

Should children have to go to
school in the summer?

WRITING TO PERSUADE – 2ND GRADE
POW +TREE with TRANSFER: LESSON # 4

Instructor: _____

Date: _____

Student(s): _____

Purpose: Review POW & TREE, Compare Prior Performance to Current Writing Behavior

Objectives: Review and practice POW and TREE, reinforce transfer, discuss pretest story and compare to current writing

Materials Needed: Mnemonic charts, transition word chart, TREE graphic organizer, Transfer Sheet, Self-Instructions Sheet, Rocket Graphing Sheet, paper example: (for computer), pretest paper, collaborative paper, pencil, scratch paper, lined paper, student folder, PBS tickets.

Behavioral Component: Review school-wide behavior goals and tell student that PBS tickets can be earned in writing lessons, and will be turned in to their classroom box. Fill in ticket with name, date, etc. Use high rates of positive feedback throughout the lesson, and use ignoring, etc.

_____ I. Test POW and TREE

Test to see if the student remembers **POW** and the **writing to persuade reminder** by writing the mnemonic out on a piece of scratch paper. Spend some time practicing the parts out loud. Use the rapid fire cards to play a game. Tell the student you will test them on it each day to make sure he/she has it. Be sure the student remembers that **TREE** is the trick for **O**.

_____ II. Find TREE (if needed)

Put out TREE reminder chart, graphic organizer and transition chart. Go through two more paper examples (for computer) and have student verbally identify the paper parts - what the writer believes, at least three reasons, and an ending sentence. Be sure to model writing in note form. **For each of these papers, ask the student if they can think of more reasons! Number and write the reasons on the graphic organizer. Ask the student what transition words could be used with the additional reasons. BE SURE TO EXAMINE PARTS! Are they all there?**

_____ III. Transfer

Review the meaning of transfer briefly. Ask student to orally report back one time they used or could have used all/ parts of POW and/or TREE in other classes or for other kinds of writing tasks. If necessary, brainstorm together some classes or other writing tasks they could use both POW and TREE for, being sure to note that we should use POW with TREE whenever we use TREE. Other writing tasks could be: letters to friends, reports on special topics, writing for a

school newsletter, writing to a leader like the principal or the president, to convince them of what you believe in. Briefly note that for some tasks, all parts of the TREE trick might not be right to use - so what could we do? (Change TREE to fit the kind of paper we need to write; don't use all of TREE if it doesn't make sense).

____ IV. Establish Prior Performance

Say, "Remember the writing to persuade paper you wrote before we learned POW and TREE?" Pull out a story the student wrote during pretesting/baseline.

Have the student read their paper and see which parts they have. (You need to have worked out ahead of time what parts the student had and which ones the student didn't have.)

Briefly note with the student which parts they have and which they don't. Emphasize with the student that they wrote this story before learning the "tricks" for writing. Now that they know the "tricks" their writing has already greatly improved. Compare the pretest paper to the collaborative paper and talk about what the student has learned about good writing. If the student is exhibiting frustration or is upset about his/her pretest story, encourage him/her to use a self-statement.

Spend some time talking about how to improve the pretest story and if the student would like, and time allows, give him the opportunity to redo the story or to do a graphic organizer for the story, now that he/she knows the "tricks" for writing a good story. Help the student make a commitment to use the strategies (tricks) to write better stories.

Set a goal to continue writing better papers. **Remind them that good and powerful writing to persuade tells the reader what you believe, gives at least three reasons why, and has an ending sentence. Also, like stories, good writing to persuade papers are fun for me to write and for others to read and make sense.**

Say, "Our goal is to have all of the parts and 'better' parts the next time we write to persuade."

____ V. Lesson wrap-up:

- A. Have the student put his/her work and charts in his/her folder.
- B. Remind the student that they will fill in the transfer chart again next time.
- C. Remind student of the POW + TREE test again next time.

Should all children learn how to use a computer?

I think that everyone should learn how to use a computer. The main reason why I think that kids should learn to use the computer is because it can help them at school. Another good reason for learning to use the computer is to play games. My final reason is that the computer is a good way to send messages and write to other kids. So if you ask me, everyone needs to learn how to use the computer. The sooner they start, the better.

Should all children learn how to use a computer?

I think that everyone should learn how to use a computer (topic). The **main reason** (transition word) why I think that kids should learn to use the computer is because it can help them at school. **Another** (transition word) good reason for learning to use the computer is to play games. My **final** (transition word) reason is that the computer is a good way to send messages and write to other kids. So if you ask me, everyone needs to learn how to use the computer (ending). The sooner they start, the better.

WRITING TO PERSUADE – 2ND GRADE
POW + TREE with TRANSFER: LESSON # 5

Instructor: _____

Date: _____

Student(s): _____

Purpose: Review POW & TREE; Collaborative Practice; Review Self-Instructions

Objectives: review POW and TREE; reinforce transfer, individual collaborative practice

Materials needed: Mnemonic chart, transition word chart, TREE graphic organizer, practice prompt: chores, Self-Instructions Sheet, Rocket Graphing Sheet, Transfer Sheet, pencils, lined paper, student folder, PBS tickets

Behavioral Component: Review school-wide behavior goals and tell student that PBS tickets can be earned in writing lessons, and will be turned in to their classroom box. Fill in ticket with name, date, etc. Use high rates of positive feedback throughout the lesson, and use ignoring, etc.

_____ I. Test POW and TREE

Test to see if the student remembers **POW+TREE**. Do it out loud to save time. It is essential that the student memorize these. If student has trouble, practice using rapid fire cue cards. Tell the student you will test them on it each day to make sure they have it.

_____ II. Transfer

Review the meaning of transfer briefly. Ask student to orally report back one time they used or could have used all/ parts of POW and/or TREE in other classes or for other kinds of writing tasks. If necessary, brainstorm together some classes or other writing tasks they could use both POW and TREE for, being sure to note that we should use POW with TREE whenever we use TREE. Other writing tasks could be: letters to friends, reports on special topics, writing for a school newsletter, writing to a leader like the principal or the president, to convince them of what you believe in. Briefly note that for some tasks, all parts of the TREE trick might not be right to use - so what could we do? (Change TREE to fit the kind of paper we need to write; don't use all of TREE if it doesn't make sense).

_____ III. Individual Collaborative Writing

Put out TREE reminder chart and transition word chart. Give student a blank graphic organizer and ask them to get out their self-statements list. Put out practice prompt: summer. This time, let the student lead as much as possible, but prompt and help as much as needed. It should be a collaborative process.

1. Say, "Remember that the first letter in **POW** is **P** - PICK my IDEA." Refer student to his self-statements for creativity or thinking free. Help student decide what they believe and think of good reasons why.

2. Say, “The second letter in **POW** is **O** - ORGANIZE my NOTES. I will use TREE to help me organize and plan my paper. Remind students TREE is the trick for O. **I will use this page to make my notes and organize my notes.** Review - what should my goal be? Write to persuade. **Good and powerful writing to persuade tells the reader what you believe, gives at least three good reasons why, and has an ending sentence. Also, good writing to persuade is fun for me to write and for others to read, and makes sense.** After students have generated notes for all the paper parts say - remember to look back at my notes and **see if I can add more notes for my paper parts - help them actually do this.** Remind them also to **look for more ideas for good word choice or million dollar words - help them do this.** Remind them to **examine** the parts. They can make a check mark or write yes/no next to the last "E" in TREE.

3. The last letter in **POW** is **W** - WRITE and SAY MORE. Encourage and remind them to start by saying “What is it I have to do here? I have to write to persuade - a good paper to persuade has all the parts and makes sense.” I need to use transition words for my reasons. I can write my paper and think of more good ideas or million dollar words as I write. Help students as much as they need to do this, but try to let them do as much as they can alone. If parts can be improved, or better word choice can be used, do make suggestions. Encourage them to use other self-statements of their choice while they write. If students do not finish writing today, they can continue at the next lesson.

____ **V. Graph Parts**

Have the student shade in the graph to equal the number of parts they included – have the student determine- does their paper have at least 5 parts - then fill in graph. For each reason over 3 written they may color in a star. Reinforce them for reaching 5 or more. Tell the student, “You blasted your rocket!” Circle a star around that rocket for each million dollar word used.

____ **VI. Lesson wrap-up:**

A. Have each student put their work and charts in their folder.

B. Remind of POW and TREE **test** again next time.

C. Remind the student that they will fill in the transfer chart again next time.

***Repeat this lesson if the student appears to have difficulty with any of the parts, with taking notes on the graphic organizer, or is having difficulty transferring notes to the actual paper.

Should children your age
have to do chores at home?

WRITING TO PERSUADE – 2ND GRADE
POW + TREE with TRANSFER: LESSON # 6

Instructor: _____

Date: _____

Student(s): _____

Purpose: Review POW & TREE; Wean off Graphic Organizer

Objectives: review POW and TREE; collaborative practice, wean off graphic organizer

Materials needed: Mnemonic chart, transition word chart, practice prompt: over night, Self-Instructions Sheet, Rocket Graphing Sheet, Transfer Sheet, pencils, lined paper, student folder, PBS tickets

Behavioral Component: Review school-wide behavior goals and tell student that PBS tickets can be earned in writing lessons, and will be turned in to their classroom box. Fill in ticket with name, date, etc. Use high rates of positive feedback throughout the lesson, and use ignoring, etc.

_____ I. Test POW and TREE

Test to see if the student remembers **POW+TREE**. Do it out loud to save time. It is essential that the student memorize these. If student has trouble, practice using rapid fire cue cards. Tell the student you will test them on it each day to make sure they have it.

_____ II. Transfer

Review the meaning of transfer briefly. Ask student to orally report back one time they used or could have used all/ parts of POW and/or TREE in other classes or for other kinds of writing tasks. If necessary, brainstorm together some classes or other writing tasks they could use both POW and TREE for, being sure to note that we should use POW with TREE whenever we use TREE. Other writing tasks could be: letters to friends, reports on special topics, writing for a school newsletter, writing to a leader like the principal or the president, to convince them of what you believe in. Briefly note that for some tasks, all parts of the TREE trick might not be right to use - so what could we do? (Change TREE to fit the kind of paper we need to write; don't use all of TREE if it doesn't make sense).

_____ III. Wean off Graphic Organizer

Explain to the student that they won't usually have a TREE organizer page with them when they have to write to persuade, so they can make their own notes on blank paper. Show them how to write down the reminder at the top of the page: TREE. Have them make a space for each part on their notes page.

_____ IV. Individual Collaborative Writing

Give student blank paper and ask them to take out their self-statements list. Put out practice prompt: over night. This time let the student lead as much as possible, but

prompt and help as much as needed. This time the student will make notes on blank paper ~ no graphic organizer! Go through the following processes but let the student do as much as possible with prompting.

1. Say, “Remember that the first letter in **POW** is **P** - PICK my IDEA.” Refer student to his self-statements for creativity or thinking free. Help student decide what they believe and think of good reasons why.

2. Say, “The second letter in **POW** is **O** - ORGANIZE my NOTES. I will use TREE to help me organize and plan my paper. Remind students TREE is the trick for O. **I will use this page to make my notes and organize my notes.** Review - what should my goal be? Write to persuade. **Good and powerful writing to persuade tells the reader what you believe, gives at least three good reasons why, and has an ending sentence. Also, good writing to persuade is fun for me to write and for others to read, and makes sense.** After students have generated notes for all the paper parts say - remember to look back at my notes and **see if I can add more notes for my paper parts - help them actually do this.** Remind them also to **look for more ideas for good word choice or million dollar words - help them do this.** Remind them to **examine** the parts. They can make a check mark or write yes/no next to the last "E" in TREE.

3. The last letter in **POW** is **W** - WRITE and SAY MORE. Encourage and remind them to start by saying “What is it I have to do here? I have to write to persuade - a good paper to persuade has all the parts and makes sense.” I need to use transition words for my reasons. I can write my paper and think of more good ideas or million dollar words as I write. Help students as much as they need to do this, but try to let them do as much as they can alone. If parts can be improved, or better word choice can be used, do make suggestions. Encourage them to use other self-statements of their choice while they write. If students do not finish writing today, they can continue at the next lesson.

____ **V. Graph Parts**

Have the student shade in the graph to equal the number of parts they included – have the student determine- does their paper have at least 5 parts - then fill in graph. For each reason over 3 written they may color in a star. Reinforce them for reaching 5 or more. Tell the student, “You blasted your rocket!” Circle a star around that rocket for each million dollar word used.

____ **VI. Lesson Wrap-Up**

- E. Have student put their work and charts in their folder.
- F. Remind the student that they will fill in the transfer chart again next time.
- G. Remind student of the POW + TREE test again next time.
- H. Tell students you have done a great job, next time we will take a practice test.

***Repeat this lesson until student can write independently. Select from remaining prompts.

Should children your age be
allowed to stay over night at
a friend's house?

WRITING TO PERSUADE – 2ND GRADE
POW + TREE with TRANSFER: LESSON # 7

Instructor: _____

Date: _____

Student(s): _____

Purpose: Post Testing Practice and Preparation

Objectives: Review and practice POW, TREE; write independently; practice post-testing conditions

Materials Needed: practice prompt (select from remaining prompts), pencil, scratch paper, lined paper, Rocket Graphing Sheet, student folder, PBS tickets.

Behavioral Component: Review school-wide behavior goals and tell student that PBS tickets can be earned in writing lessons, and will be turned in to their classroom box. Fill in ticket with name, date, etc. Use high rates of positive feedback throughout the lesson, and use ignoring, etc.

____ **I. Introduce Practice Test**

Tell your student that now you will practice taking the test for writing to persuade so that when we do it again, it will be much easier. Give the student a prompt and two blank pieces of paper, one for notes and one for writing.

____ **II. Practice Test**

Tell them, ok, now lets pretend it is a test day. What do you do first? **THEY MUST WRITE OUT TREE ON ONE PIECE OF BLANK PAPER - PROMPT THEM TO DO SO IF THEY ARE UNSURE, HELP ONLY AS NEEDED.** Once this is written out, say, “Good”, this is what you need to do first every time we do a test for writing to persuade. If student wants to write out POW, explain that he/she does not need to do this, they can just remember POW in their head - when they make notes for the paper and then write the paper, they are doing POW!!

Ask the student what they need to do next. Prompt and help only as necessary - what they need to do is make notes for each part. When they are done, remind them they can think of more ideas as they write, if they want to. Prompt for out loud self-statements only when you think they are needed. At this point, it is ok if they aren't using much out loud speech.

Ask the student what they need to do next. Prompt the student to write the paper as needed, letting them do it on their own as much as possible. Same on out loud statements, prompt only if needed.

Ask the student what they need to do next. At this point, they should read their paper, see if they have all the parts, be sure it makes sense, and see if there are any changes they would like to make. You can remind them to also see if they can use any million dollar words if this seems appropriate and not too much for them.

___ **III. Graph Parts**

Now, go over the paper with the student, counting the parts, and go ahead and graph this paper on their rockets. Compliment them on good work!

___ **IV. Lesson Wrap-Up**

Tell student "You have done a great job learning the TREE strategy, and now you can write to persuade by remembering the mnemonic, organizing your notes on blank paper, and writing a paper that is fun for others to read and makes sense. The next time I ask you to write to persuade for me, I won't be able to help you. This will be our test to see if you remember what you have learned. I will ask you to write about three more persuasive papers for me. I will make copies of your paper that I can keep, and then I will give you back all of your papers and work, your rockets, and a certificate that shows you have learned the trick for writing a good persuasive paper. Thank you so much for doing such great work!"

APPENDIX B

Treatment Fidelity Checklist

PW 06-07; TREE Fidelity (rev 11/06)

Lesson 1, Part 1

Teacher: _____ **Date:** _____ **Observer:** _____

Student: _____

___ **All materials ready, lesson begins smoothly and on time**

___ **I. Review Behavioral Component**

___ **II. Introduce yourself**

___ **III. Introduce POW**

- a. Go over parts of POW
- b. Practice POW
- c. Discuss why POW is important

___ **IV. Discuss Writing to Persuade**

- a. Discuss the word persuade
- b. Discuss writing to persuade (tells what you believe, gives at least 3 reasons why, has a good ending sentence; makes sense)

___ **V. Introduce TREE**

- a. Discuss each part of TREE

___ **VI. Find TREE in an essay**

- a. Introduce graphic organizer
- b. Read essay, student underlines parts, write notes on graphic organizer – number reasons
- c. Discuss and find transition words
- d. Examine the parts – all are there

___ **X. Practice Story Parts Reminder**

___ **XI. Lesson Wrap Up**

- a. Announce test (no grade...for fun) next session
- b. Pack up folder
- c. Do ticket

N OF POSSIBLE STEPS TODAY _____ **N OF STEPS COMPLETED TODAY:** _____

Answer each Yes or No below, Yes means done very well; make notes regarding any NOs. Explain each NO, or make any other notes, at the bottom of the page or on the back as needed.

- | | | |
|--|------------|-----------|
| 1. Student was well engaged in lesson, teacher held discussion where indicated. | YES | NO |
| 2. Teacher modified to student questions, answers, and needs appropriately | YES | NO |
| 3. Teacher was well-prepared, positive, and made smooth transitions | YES | NO |
| 4. Lesson pace is appropriate | YES | NO |

PW 06-07; TREE Fidelity (rev 11/06)

Lesson 1, Part 2

Teacher: _____ Date: _____

Student: _____

Fidelity collected by: _____

_____ All materials ready, lesson begins smoothly and on time

_____ I. Review Behavioral Components

_____ II. Test POW and TREE

- a. Test on paper
- b. Use rapid fire cards

_____ III. Find TREE parts in second essay (City or country)

- a. make notes on graphic organizer
- b. find transition words

_____ IV. Discuss Transfer

- a. goal – use parts or all for next time
- b. explain transfer chart and reporting back next time
- c. emphasize using in other classes or tasks

_____ V. Lesson Wrap Up

- a. announce test
- b. remind to transfer
- c. pack up folder
- d. Do ticket

N OF POSSIBLE STEPS TODAY _____ N OF STEPS COMPLETED TODAY: _____

Answer each Yes or No below, Yes means done very well; make notes regarding any NOs.

Explain each NO, or make any other notes, at the bottom of the page or on the back as needed.

- | | | |
|---|-----|----|
| 5. Student was well engaged in lesson, teacher held discussion where indicated. | YES | NO |
| 6. Teacher modified to student questions, answers, and needs appropriately | YES | NO |
| 7. Teacher was well-prepared, positive, and made smooth transitions | YES | NO |
| 4. Lesson pace is appropriate | YES | NO |

PW 06-07; TREE Fidelity (rev 11/06)
Lesson 2

Teacher: _____ **Date:** _____ **Observer:** _____
Student: _____

___ **All materials ready, lesson begins smoothly and on time**

___ **I. Review Behavioral Component**

___ **II. Test POW and TREE**

- d. Test on scratch paper, practice on paper or with cards

___ **III. Find TREE in two more essays**

- e. have students think of more reasons for each essay
- f. find transition words
- g. examine the parts
- h. model writing in note form on the graphic organizer for the first essay only

___ **IV. Model Self-Statements for “P” in POW**

- i. Statements for good ideas; coping statements; problem definition, etc
- j. Records students’ self-statements for P

___ **V. Model Self-Statements for “O”**

- k. Use self-statements while making notes for each part
- l. Look back at notes; examine that all parts are there
- m. Look for good use of transition words

___ **VI. Model writing an Essay using POW and TREE**

- n. Use several forms of self-statements
- o. Model using transition words
- p. Model self-evaluation for all parts, making sense; examining parts; use self-reinforcement

___ **VII. Self-Statements for TREE**

- q. Add to student’s self statement lists: what to say to get started; while you work; when you finish
- r. Note can think these in our heads

___ **VIII. Graph the Essay**

___ **IX. Lesson wrap Up**

- s. Keep your essay and graph; pack up student folder
- t. Remind of POW and TREE test again next time
- u. Remind student to transfer the strategy
- v. Do ticket

N OF POSSIBLE STEPS TODAY _____ **N OF STEPS COMPLETED TODAY:** _____

Answer each Yes or No below, Yes means done very well; make notes regarding any NOs. Explain each NO, or make any other notes, at the bottom of the page or on the back as needed.

- | | | |
|--|------------|-----------|
| 1. Student was well engaged in lesson, teacher held discussion where indicated. | YES | NO |
| 2. Teacher modified to student questions, answers, and needs appropriately | YES | NO |

- | | | |
|---|-----|----|
| 3. Teacher was well-prepared, positive, and made smooth transitions | YES | NO |
| 4. Lesson pace is appropriate | YES | NO |

PW 06-07; TREE Fidelity (rev 11/06)
Lesson 3

Teacher: _____ Date: _____ Observer: _____
 Student: _____

_____ All materials ready, lesson begins smoothly and on time

_____ I. Review behavioral component

_____ II. Test POW and TREE

_____ III. IF NEEDED, find parts in essay, find transition words

_____ IV. Review transfer, ask student to report back on use next time

_____ V. Collaborative Writing

- a. Let student lead as much as possible, prompt and help as needed
- b. Remind student, if needed, to use POW and TREE, etc
- c. Remind student to use self-statements, while doing P, O, and W
- d. Remind student to examine if all parts are used; to use transition words
- e. Be sure essay has all parts and good transition words

_____ VI. Graph Essay Parts

- a. Reinforce for having all parts
- a. Use stars for transition words

_____ VII. Lesson Wrap Up

- w. Pack up student folder
- x. Remind of POW and TREE test again next time
- y. Remind student to transfer the strategy, fill in chart next time
- z. Do ticket

N OF POSSIBLE STEPS TODAY _____ **N OF STEPS COMPLETED TODAY:** _____

Answer each Yes or No below, Yes means done very well; make notes regarding any NOs. Explain each NO, or make any other notes, at the bottom of the page or on the back as needed.

- | | | |
|---|-----|----|
| 1. Student was well engaged in lesson, teacher held discussion where indicated. | YES | NO |
| 2. Teacher modified to student questions, answers, and needs appropriately | YES | NO |
| 3. Teacher was well-prepared, positive, and made smooth transitions | YES | NO |
| 4. Lesson pace is appropriate | YES | NO |

PW 06-07; TREE Fidelity (rev 11/06)
Lesson 4

Teacher: _____ **Date:** _____ **Observer:** _____
Student: _____

_____ **All materials ready, lesson begins smoothly and on time**

_____ **I. Review behavioral component**

_____ **II. Test POW and TREE, etc**

_____ **III. Review transfer, fill in chart**

_____ **IV. Establish prior performance**

- a. Use pre-selected baseline essay
- b. Have student read, identify and count parts (teacher has counted ahead)
- c. Briefly discuss what parts are there, what parts are not; emphasize essay was written before student learned the strategy/trick; talk about what student has learned
- d. Discuss how essay could be improved, include transition words
- e. Give student opportunity to rewrite – NOT required
- f. Set goal to continue writing better essays to persuade; make sense, fun to read and write, have all parts, use transition words

_____ **V. Lesson Wrap Up**

- d. Announce test (no grade...for fun) next session
- e. Pack up folder
- f. Do ticket

N OF POSSIBLE STEPS TODAY _____ **N OF STEPS COMPLETED TODAY:** _____

Answer each Yes or No below, Yes means done very well; make notes regarding any NOs. Explain each NO, or make any other notes, at the bottom of the page or on the back as needed.

- | | | |
|--|------------|-----------|
| 1. Student was well engaged in lesson, teacher held discussion where indicated. | YES | NO |
| 2. Teacher modified to student questions, answers, and needs appropriately | YES | NO |
| 3. Teacher was well-prepared, positive, and made smooth transitions | YES | NO |
| 4. Lesson pace is appropriate | YES | NO |

PW 06-07; TREE Fidelity (rev 11/06)
Lesson 5

Teacher: _____ **Date:** _____ **Observer:** _____
Student: _____

_____ **All materials ready, lesson begins smoothly and on time**

_____ **I. Review behavioral component**

_____ **II. Test POW and TREE, etc**

_____ **III. Review transfer, complete chart**

_____ **IV. Collaborative writing**

- f. Let student lead as much as possible, prompt and help as needed
- g. Remind student, if needed, to use POW and TREE, etc
- h. Remind student to use self-statements, while doing P, O, and W
- i. Remind student to see if all parts are used; to use transition words
- j. Be sure essay has all parts; examine

_____ **VI. Graph Essay Parts**

- a. Reinforce for having all parts; if part is missing, talk about how to revise essay and set goal for all parts next time
- a. Use stars for transition words

_____ **VII. Lesson Wrap Up**

- aa. Pack up student folder
- bb. Remind of POW and TREE reminder test again next time
- cc. Remind student to transfer the strategy, fill in chart next time
- dd. Do ticket

REPEAT THIS LESSON IF STUDENT HAS DIFFICULTY WITH ANY TREE PARTS, USING TRANSITION WORDS, MAKING NOTES, USING NOTES TO WRITE

N OF POSSIBLE STEPS TODAY _____ **N OF STEPS COMPLETED TODAY:** _____

Answer each Yes or No below, Yes means done very well; make notes regarding any NOs. Explain each NO, or make any other notes, at the bottom of the page or on the back as needed.

- | | | |
|--|------------|-----------|
| 1. Student was well engaged in lesson, teacher held discussion where indicated. | YES | NO |
| 2. Teacher modified to student questions, answers, and needs appropriately | YES | NO |
| 3. Teacher was well-prepared, positive, and made smooth transitions | YES | NO |
| 4. Lesson pace is appropriate | YES | NO |

PW 06-07; TREE Fidelity (rev 11/06)
Lesson 6

Teacher: _____ **Date:** _____ **Observer:** _____
Student: _____

_____ **All materials ready, lesson begins smoothly and on time**

_____ **I. Review behavioral component**

_____ **II. Test POW and TREE, etc**

_____ **III. Review transfer, complete chart**

_____ **IV. Wean off graphic organizer**

- a. Show how to write reminder on paper
- b. Show how to make notes on paper

_____ **V. Collaborative Writing**

- k. Let student lead as much as possible, prompt and help as needed
- l. Remind student, if needed, to use POW and TREE, etc
- m. Remind student to use self-statements, while doing P, O, and W
- n. Remind student to see if all parts are used; to use transition words
- o. Be sure essay has all parts

_____ **VI. Graph Essay Parts**

- a. Reinforce for having all parts
- a. Use stars for transition words

_____ **VII. Lesson Wrap Up**

- ee. Pack up student folder
- ff. Remind of POW and TREE reminder test again next time
- gg. Remind student to transfer the strategy, fill in chart next time
- hh. Do ticket

N OF POSSIBLE STEPS TODAY _____ **N OF STEPS COMPLETED TODAY:** _____

Answer each Yes or No below, Yes means done very well; make notes regarding any NOs. Explain each NO, or make any other notes, at the bottom of the page or on the back as needed.

- | | | |
|--|------------|-----------|
| 1. Student was well engaged in lesson, teacher held discussion where indicated. | YES | NO |
| 2. Teacher modified to student questions, answers, and needs appropriately | YES | NO |
| 3. Teacher was well-prepared, positive, and made smooth transitions | YES | NO |
| 4. Lesson pace is appropriate | YES | NO |

PW 06-07; TREE Fidelity (rev 11/06)
Lesson 7

Teacher: _____ **Date:** _____ **Observer:** _____
Student: _____

_____ **All materials ready, lesson begins smoothly and on time**

_____ **I. Review behavioral component**

_____ **II. Introduce practice test**

- a. Explain, will practice taking test today so it will be easier when we do the test it will be easier
- b. Give one starter, two blank pieces of paper (for notes, essay)

_____ **III. Practice test**

- a. Let's pretend it is test day. What do you do first? Student must write out reminder
- b. Wait and see if student does each step from here independently; prompt only if needed

_____ **IV. Graph essay parts**

_____ **V. Lesson wrap up**

- a. If student is ready for post test (repeat this lesson if necessary): explain, next time I ask you to write an essay for me, I cannot help you. Remind student to use POW, TREE etc, transition words.
- b. I will ask you to write about 3 more essays for me
- c. When we are done, you will get your folder with all of your essays and work, your rockets, and a certificate that shows you have learned the trick for writing a good essay
- d. Thank the student for all their hard work
- e. Pack up folder
- f. Do ticket

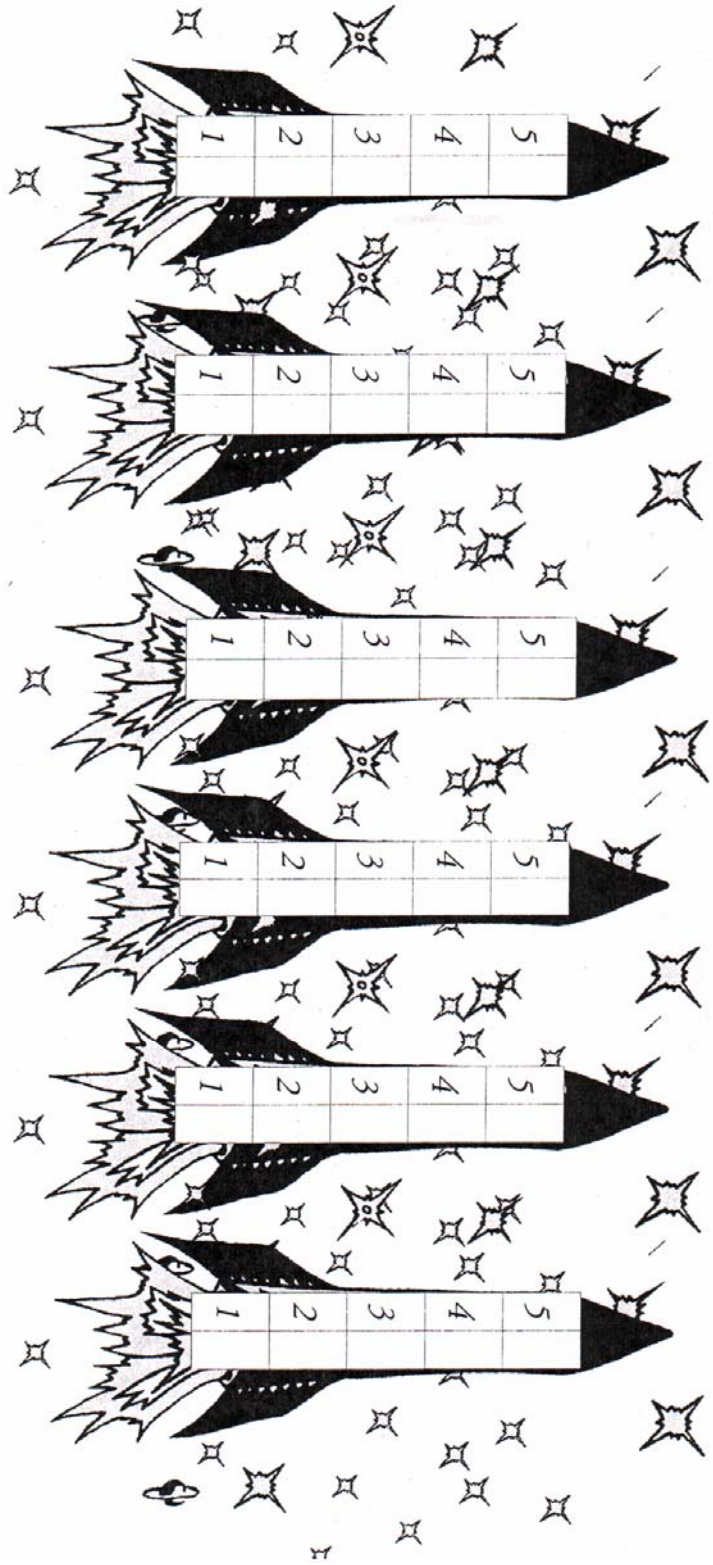
N OF POSSIBLE STEPS TODAY _____ **N OF STEPS COMPLETED TODAY:** _____

Answer each Yes or No below, Yes means done very well; make notes regarding any NOs. Explain each NO, or make any other notes, at the bottom of the page or on the back as needed.

- | | | |
|--|------------|-----------|
| 1. Student was well engaged in lesson, teacher held discussion where indicated. | YES | NO |
| 2. Teacher modified to student questions, answers, and needs appropriately | YES | NO |
| 3. Teacher was well-prepared, positive, and made smooth transitions | YES | NO |
| 4. Lesson pace is appropriate | YES | NO |

APPENDIX C

Rocket Graphing Sheet



Rockets

APPENDIX D

POW and TREE Mnemonic

POW

- P Pick my Idea
 - O Organize my Notes
 - W Write and Say More
-

TREE



TOPIC SENTENCE

REASONS

ENDING



T

TOPIC Sentence

Tell what you believe!

R

REASONS - 3 or More

Why do I believe this?

Will my readers believe this?

E

ENDING

Wrap it up right!

E

EXAMINE

Do I have all my parts?

APPENDIX E

Graphic Organizer

T **TOPIC** Sentence
Tell what you believe!

POW + TREE

R **REASONS - 3 or More**
Why do I believe this? Will my readers believe this? Number my reasons.

E **ENDING**
Wrap it up right!

E **EXAMINE**
Do I have all my parts? Yes? _____ No? _____



APPENDIX F

PBS Ticket

Respect **Responsibility** **Best Effort**

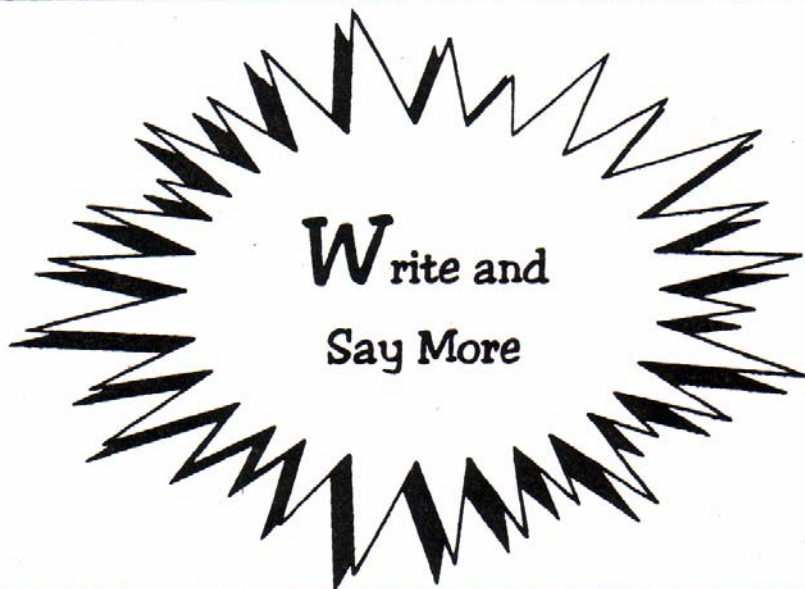
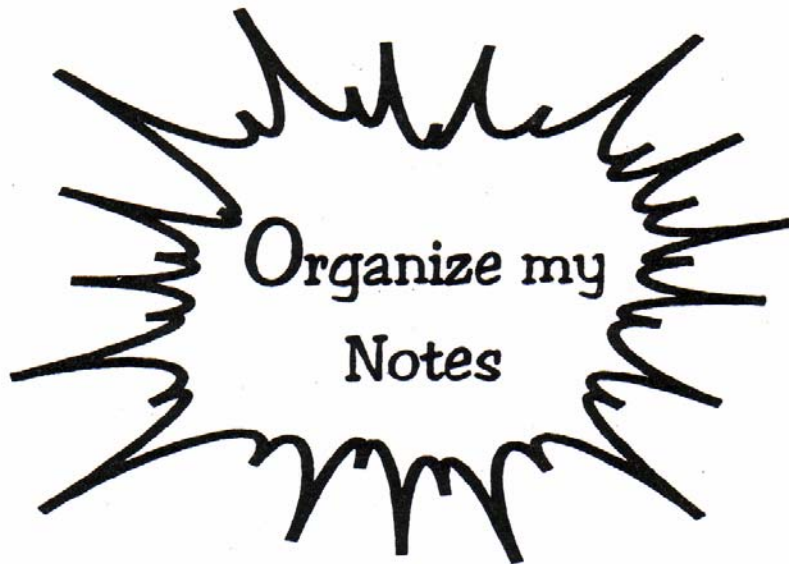
Tiger Trait Card

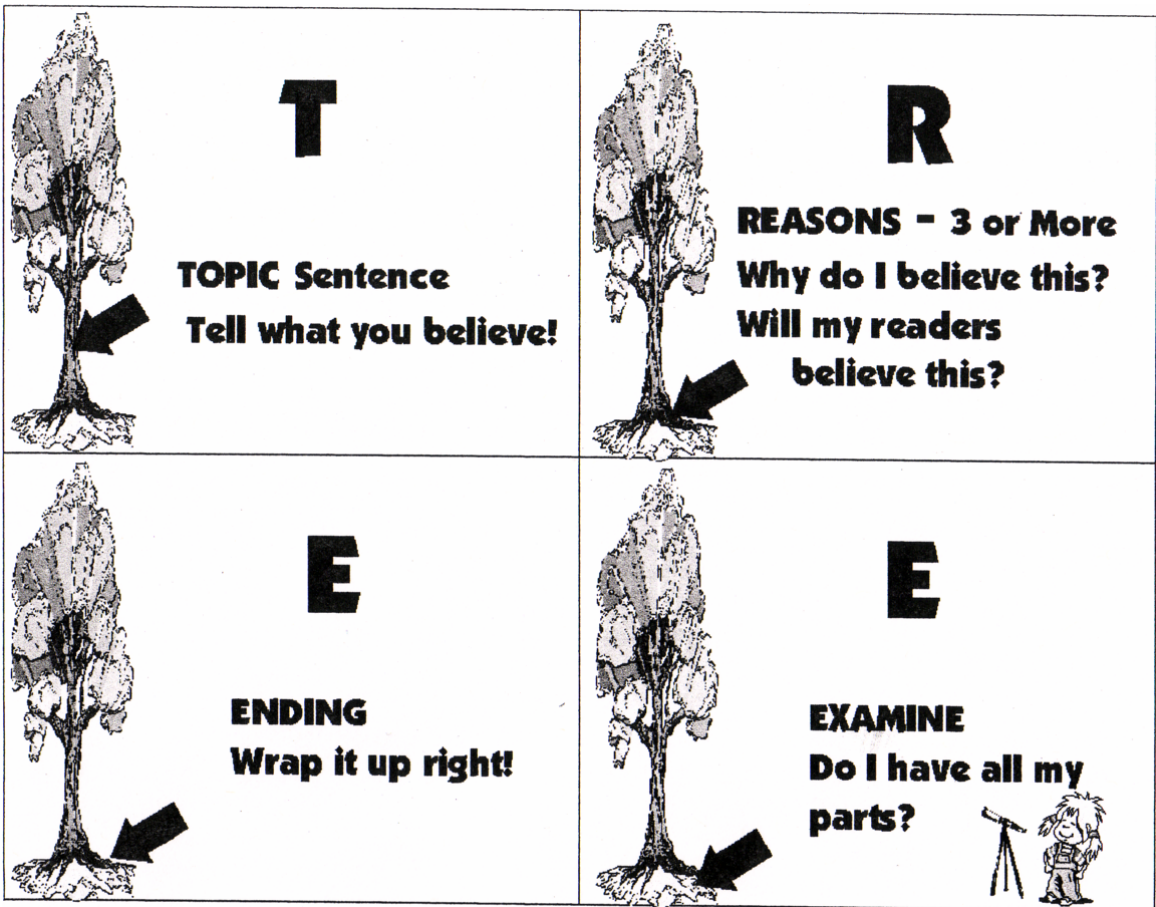
Student: _____

Staff: _____

February Tiger Trait: CITIZENSHIP

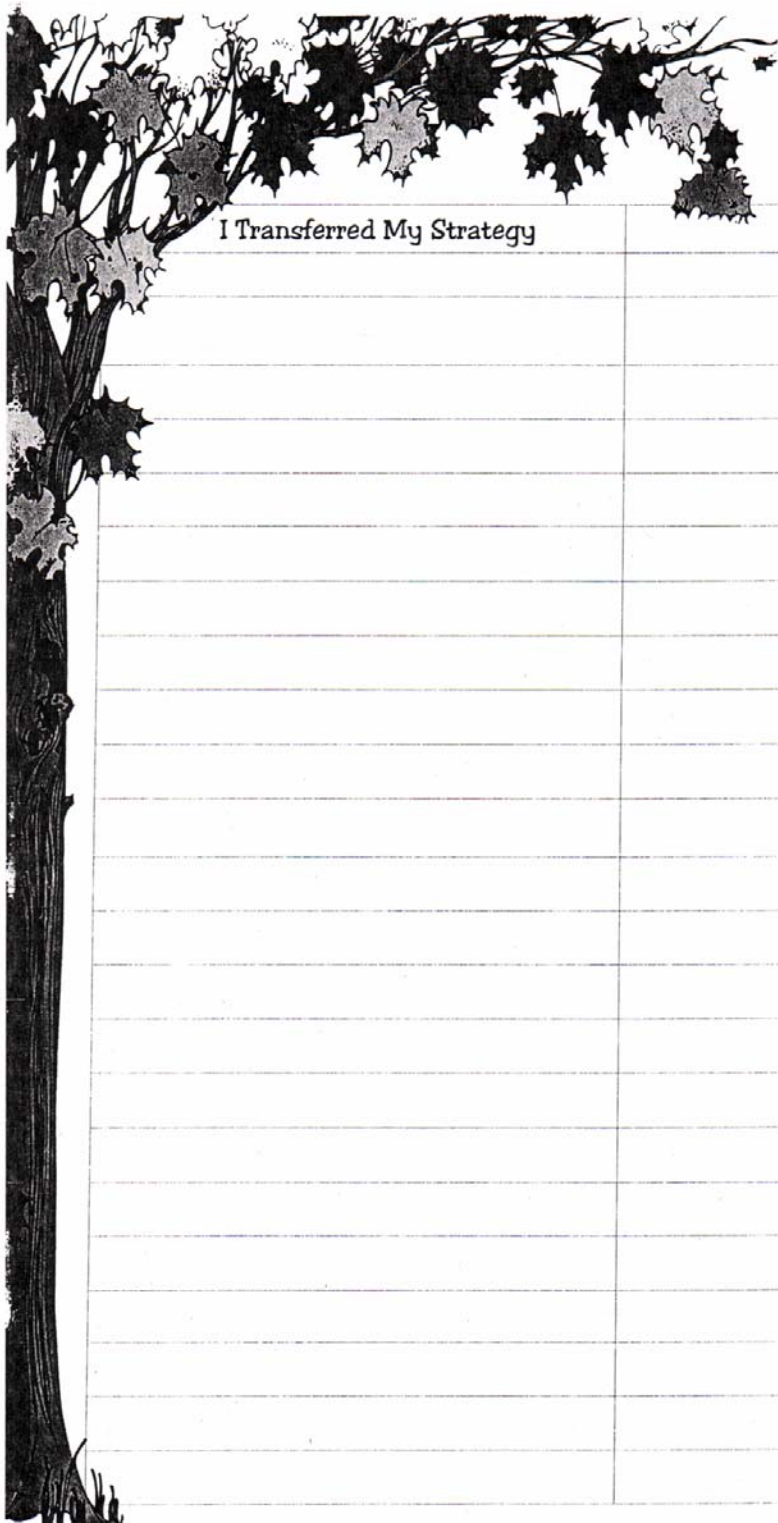
APPENDIX G
Rapid Fire Cards





APPENDIX H

Transfer Sheet



I Transferred My Strategy

APPENDIX I
Transition Word List

Words You Can Use to Show a Reason

First

Second

Third

Fourth

Fifth

Another

Also

A different

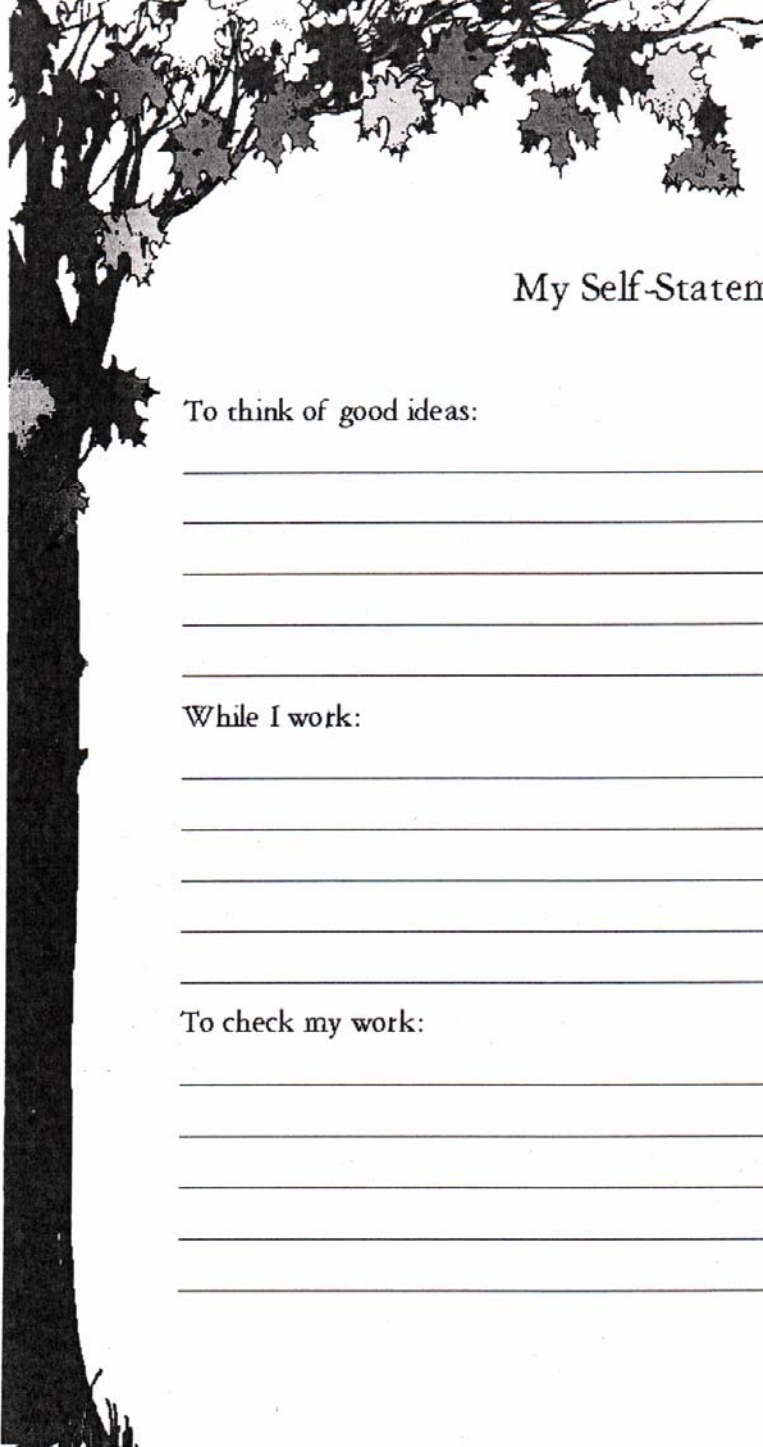
One more

Next

My final

Finally

APPENDIX J
Self-Statement Sheet



My Self-Statements

To think of good ideas:

While I work:

To check my work:

APPENDIX K

Social Validity Interview

SOCIAL VALIDITY INTERVIEW (SRSD PERSUASIVE) WRITING INSTRUCTION

Name of student: _____ RA: _____
Date: _____

Directions: Ask students who received SRSD PERSUASIVE WRITING instruction each of the following questions. Record their answers exactly.

“I want you to think about the things that you have learned while working with me. This includes POW; the TREE strategy for writing persuasive essays, and your self-statements.

1. If you were the teacher would you teach POW and the TREE strategy to your students? Why or Why not?

2. If you did teach POW and the TREE strategy to students, What would you do the same?

3. What would you do different?

4. What did you like or not like about POW?

5. What did you like or not like about the TREE strategy?

6. What did you like or not like about the rockets?

7. What did you like or not like about having self statements?

8. What can you use POW and what can POW help you do? (follow-up – Can you think of any other activities or places for using POW?)

9. Where can you use the TREE strategy and what Can the TREE strategy help you do? (follow up – Can you think of any other activities for using TREE?)

10. Where can you use your self-statements that you have chosen and what can your self-statements help you with? (follow up – Can you think of any other activities or places for using the self-statements?)

APPENDIX L

IRP-15 Adapted

Adapted Version of the Intervention Rating Profile-15 -PRE

The purpose of this questionnaire is to obtain information that will aid in the selection of classroom interventions. These interventions will be used by teachers of children with identified needs. Please circle the number which best describes your agreement or disagreement with each statement.

	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
1. This would be an acceptable intervention for the child's needs.	1	2	3	4	5	6
2. Most teachers would find this intervention appropriate for children with similar needs.	1	2	3	4	5	6
3. This intervention should prove effective in supporting the child's needs.	1	2	3	4	5	6
4. I would suggest the use of this intervention to other teachers.	1	2	3	4	5	6
5. The child's needs are severe enough to warrant use of this intervention.	1	2	3	4	5	6
6. Most teachers would find this intervention suitable for the needs of this child.	1	2	3	4	5	6
7. I would be willing to use this intervention in the classroom setting.	1	2	3	4	5	6
8. This intervention would <i>not</i> result in negative side effects for the child.	1	2	3	4	5	6
9. This intervention would be appropriate for a variety of children.	1	2	3	4	5	6
10. This intervention is consistent with those I have used in classroom settings.	1	2	3	4	5	6
11. The intervention is a fair way to handle the child's needs.	1	2	3	4	5	6
12. This intervention is reasonable for the needs of the child.	1	2	3	4	5	6
13. I like the procedures used in this intervention.	1	2	3	4	5	6
14. This intervention would be a good way to handle this child's needs.	1	2	3	4	5	6
15. Overall, this intervention would be beneficial for the child.	1	2	3	4	5	6

Comments: _____

Adapted Version of the Intervention Rating Profile-15 - POST

The purpose of this questionnaire is to obtain information that will aid in the selection of future classroom interventions. These interventions will be used by teachers of children with identified needs. Please circle the number which best describes your agreement or disagreement with each statement.

	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Slightly disagree</i>	<i>Slightly agree</i>	<i>Agree</i>	<i>Strongly agree</i>
1. This was an acceptable intervention for the child's needs.	1	2	3	4	5	6
2. Most teachers would find this intervention appropriate for children with similar needs.	1	2	3	4	5	6
3. This intervention proved effective in supporting the child's needs.	1	2	3	4	5	6
4. I would suggest the use of this intervention to other teachers.	1	2	3	4	5	6
5. The child's needs were severe enough to warrant use of this intervention.	1	2	3	4	5	6
6. Most teachers would find this intervention suitable for the needs of this child.	1	2	3	4	5	6
7. I would be willing to use this intervention in the classroom setting.	1	2	3	4	5	6
8. This intervention did <i>not</i> result in negative side effects for the child.	1	2	3	4	5	6
9. This intervention would be appropriate for a variety of children.	1	2	3	4	5	6
10. This intervention was consistent with those I have used in classroom settings.	1	2	3	4	5	6
11. The intervention was a fair way to handle the child's needs.	1	2	3	4	5	6
12. This intervention was reasonable for the needs of the child.	1	2	3	4	5	6
13. I liked the procedures used in this intervention.	1	2	3	4	5	6
14. This intervention was a good way to handle this child's needs.	1	2	3	4	5	6
15. Overall, this intervention was beneficial for the child.	1	2	3	4	5	6

Comments: _____

APPENDIX M

CIRP Adapted

Adapted Version of the Children’s Intervention Rating Profile - PRE

	<i>I agree</i>					<i>I do not agree</i>
1. The program we will use sounds fair.						
2. I think my teacher will be too harsh on me.						
3. Being in this program may cause problems with my friends.						
4. There are better ways to teach me how to write better.						
5. This program will help other kids, too.						
6. I think I will like being in this program.						
7. I think being in this program will help me do better in school.						

Comments: _____

Source: Adapted from Witt, J.C. & Elliott, S.N. (1985). Acceptability of classroom intervention strategies. In Kratochwill, T.R. (Ed.), *Advances in School Psychology, Vol. 4*, 251 – 288. Mahwah, NJ: Erlbaum.

Adapted Version of the Children’s Intervention Rating Profile - POST

	<i>I agree</i>					<i>I do not agree</i>
1. The program we used was fair.						
2. I think my teacher was too harsh on me.						
3. Being in this program caused problems with my friends.						
4. There were better ways to teach me to write better.						
5. This program could help other kids, too.						
6. I liked the program we used.						
7. Being in this program helped me do better in school.						

Comments: _____

Source: Adapted from Witt, J.C. & Elliott, S.N. (1985). Acceptability of classroom intervention strategies. In Kratochwill, T.R. (Ed.), *Advances in School Psychology, Vol. 4*, 251 – 288. Mahwah, NJ: Erlbaum.

APPENDIX N

Essay Probes

PERSUASIVE ESSAY RECORDING SHEET

RA: _____

Student: _____

Student ID: _____

Probe #: _____

Date: _____

Time spent planning (time between the end of your directions and the start of writing): _____

Observations: _____

Is it better to be an only child or to have brothers and sisters?

Should children be allowed to choose their own bedtime?

Do you think children should be required to clean their room?

Should students be allowed to eat snacks in the classroom?

Should parents give their children money for having good grades on their report cards?

Do you think children should be allowed to eat whatever they want?

Do you think children should be allowed to choose the television they watch?

Do you think the school day should be longer?

Do you think your parents should decide who your friends are?

Are school rules necessary?

Do you think teachers should give students homework?

Should teachers give students grades?

Is it better to have a sister or a brother?

Do you think children should be allowed to have their own pets?

Should boys and girls go to different schools?

Should boys and girls play soccer together?

APPENDIX O
Student Essay Samples

Kathy

Baseline Essay Sample: *Should children be allowed to choose their own bedtime?*

Yes, kids should choose their own bedtime. I will choose midnight.

Essay Scores: Number of Elements (2) Quality (1) Number of Words (11)

Post-Instructional Essay Sample: *Should children be allowed to eat whatever they want?*

No, kids shouldn't be able to eat what they want. First, you might die. Second, you might get sick. Third, you might go to the hospital. Fourth, you won't play with your friends.

Last, you won't go on trips. That's why kids shouldn't be able to eat what they want.

Essay Scores: Number of Elements (7) Quality (6) Number of Words (50)

Bob

Baseline Essay Sample: *Do you think children should be required to clean their room?*

Yes, because there would be bugs in their room!

Essay Scores: Number of Elements (1) Quality (2) Number of Words (9)

Post-Instructional Essay Sample: *Do you think children should be allowed to choose the television they watch?*

No, because they might choose a scary movie and they might have dreams about it. Their eyes might hurt from so much TV. And they might leave the TV on and waste electricity.

Essay Scores: Number of Elements (5) Quality (5) Number of Words (33)

Skylar

Baseline Essay Sample: *Is it better to be an only child or to have brothers and sisters?*

It is better to have brothers and sisters because it wouldn't be fun being by yourself.

Essay Scores: Number of Elements (2) Quality (2) Number of Words (16)

Post-Instructional Essay Sample: *Do you think teachers should give students homework?*

Yes. I think teachers should give children homework. First, kids can learn better. Second, so kids can get a 100 on their test. Finally, kids can go on to a different grade. That's why teachers should give children homework. Then End!

Essay Scores: Number of Elements (5) Quality (6) Number of Words (41)

Michelle

Baseline Essay Sample: *Do you think children should be allowed to choose the television they watch?*

Yes, children be allowed to choose what they want to watch.

Essay Scores: Number of Elements (1) Quality (1) Number of Words (11)

Post-Instructional Essay Sample: *Do you think teachers should give students homework?*

Children should do homework because you have to do it. It makes you strong. There people done that before. I think you should do it because it's so easy. All you have to do is one sheet. It's not hard for you. You should do it. It's fun to [do] homework.

Homework is a lots fun. It is really fun.

Essay Scores: Number of Elements (9) Quality (5) Number of Words (60)

Lisa

Baseline Essay Sample: *Should children be allowed to choose their own bedtime?*

Children should not be allowed to choose their bedtime because school and you stay there a long time. You should go to bed it least 8:00 or 9:00 because you have to be at school at 8:00.

Essay Scores: Number of Elements (3) Quality (5) Number of Words (37)

Post-Instructional Essay Sample: *Do you think children should be allowed to have their own pets?*

Yes, I believe children should have their own pet. First, your friends won't have to come over a lot. You can play with your pet. Another reason is you can see what it's like to have a pet. Next, you will have another family member in your family. Another reason, if you have another pet, it will have a friend to play with. Next, pets are fun. Pets need food and water. Another reason you have to be responsible of your pet. That's why I believe children should have their own pet.

Essay Scores: Number of Elements (10) Quality (6) Number of Words (92)

Ann

Baseline Essay Sample: *Should parents give their children money for having good grades on their report cards?*

I think they can give sometimes, but not all the time, because they probably might waste the money.

Essay Scores: Number of Elements (2) Quality (2) Number of Words (18)

Post-Instructional Essay Sample: *Do you think children should be allowed to have their own pets?*

I think children should have pets. First, they have to be responsible. Second, they can pick it out. Third, they can have a dog, cat, fish, and bunny; whatever they want. Fourth, they can play with the pet. Fifth, they can sleep with it. Sixth, they can run with it. Seventh, they can throw ball with it.

Essay Scores: Number of Elements (9) Quality (5) Number of Words (57)

Note. Essays were corrected for spelling, capitalization, and punctuation.

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